

NYISO Market Monitoring Plan

Addendum A

Market Mitigation Measures

APRIL 18, 2000

1. PURPOSE AND OBJECTIVES

a) These NYISO market power mitigation measures (“Mitigation Measures”) are intended to provide the means for the NYISO 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. Consistent with the provisions of the Plan, these Mitigation Measures are intended to minimize interference with open and competitive markets, and thus to permit, to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions. To that end, the Mitigation Measures authorize the mitigation only of specific conduct that exceeds well-defined thresholds specified below.

b) In addition, the NYISO shall monitor the markets it administers for conduct that it determines constitutes an abuse of market power but does not trigger the thresholds specified below for the imposition of mitigation measures by the NYISO. If the NYISO identifies any such conduct, and in particular conduct exceeding the thresholds for presumptive market effects specified in Section 3.2(c) below, it shall make a filing under § 205 of the Federal Power Act, 16 U.S.C. § 824d (1999) (“§ 205”) with the Commission requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the NYISO believes warrants mitigation, shall propose a specific mitigation measure for the conduct, and shall set forth the NYISO's justification for imposing that mitigation measure.

2. CONDUCT WARRANTING MITIGATION

2.1. Conduct Subject to Mitigation

Mitigation Measures may be applied: (i) to the bidding, scheduling or operation of an “Electric Facility,” defined for purposes of this Addendum to the Plan as an electric generation resource or transmission facility; or (ii) as specified in § 2.3(b)).

2.2. Conditions for the Imposition of Mitigation Measures

a) To achieve the foregoing purpose and objectives, Mitigation Measures should only be imposed to remedy conduct that would substantially distort or impair the competitiveness of any of the New York Electric Markets administered by the NYISO. Accordingly, the NYISO shall seek to impose Mitigation Measures only to remedy conduct that:

- (1) is significantly inconsistent with competitive conduct; and

- (2) would result in a material change in one or more prices in a New York Electric Market or production cost guarantee payments (“guarantee payments”) to a Market Party.

b) In general, the NYISO shall consider a Market Party's conduct to be inconsistent with competitive conduct if the conduct would not be in the economic interest of the Market Party in the absence of market power. The categories of conduct that are inconsistent with competitive conduct include, but may not be limited to, the three categories of conduct specified in Section 2.3 below.

2.3. Categories of Conduct that May Warrant Mitigation

a) The following categories of conduct, whether by a single firm or by multiple firms acting in concert, may cause a material effect on prices or guarantee payments in a New York Electric Market if exercised from a position of market power. Accordingly, the NYISO shall monitor the New York Electric Markets for the following categories of conduct, and shall impose appropriate Mitigation Measures if such conduct is detected and the other applicable conditions for the imposition of Mitigation Measures are met:

- (1) *Physical withholding of an Electric Facility*, that is, not offering to sell or schedule the output of or services provided by an Electric Facility capable of serving a New York Electric Market. Such withholding may include, but not be limited to, (i) falsely declaring that an Electric Facility has been forced out of service or otherwise become unavailable, (ii) refusing to offer bids or schedules for an Electric Facility when it would be in the economic interest, absent market power, of the withholding entity to do so, or (iii) operating a generating unit in real-time to produce an output level that is less than the NYISO’s dispatch instruction.
- (2) *Economic withholding of an Electric Facility*, that is, submitting bids for an Electric Facility that are unjustifiably high so that (i) the Electric Facility is not or will not be dispatched or scheduled, or (ii) the bids will set a market clearing price.
- (3) *Uneconomic production from an Electric Facility*, that is, increasing the output of an Electric Facility to levels that would otherwise be uneconomic in order to cause, and obtain benefits from, a transmission constraint.

b) Mitigation Measures may also be imposed to mitigate the market effects of a rule, standard, procedure or design feature of a New York Electric Market that allows a Market Party to manipulate market prices or otherwise impair the efficient operation of that market, pending the revision of such rule, standard, procedure or design feature to preclude such manipulation of prices or impairment of efficiency.

c) Taking advantage of opportunities to sell at a higher price or buy at a lower price in a market other than a New York Electric Market shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.

d) The NYISO shall monitor New York Electric Markets for other categories of conduct, whether by a single firm or by multiple firms acting in concert, that have material

effects on prices or guarantee payments in a New York Electric Market. The NYISO shall: (i) seek to amend the foregoing list as may be appropriate, in accordance with the procedures and requirements for amending the Plan, to include any such conduct that would substantially distort or impair the competitiveness of any of the New York Electric Markets administered by the NYISO; and (ii) seek such other authorization to mitigate the effects of such conduct from the FERC as may be appropriate.

3. CRITERIA FOR IMPOSING MITIGATION MEASURES

3.1. Identification of Conduct Inconsistent with Competition

Conduct that may potentially warrant the imposition of a mitigation measure includes the categories described in Section 2.3 above, which shall be detected through the use of indices and screens developed, adopted and made available as specified in the Plan. The thresholds listed in sections 3.1.1 to 3.1.3 below shall be used to identify substantial departures from competitive conduct indicative of an absence of workable competition.

3.1.1. Thresholds for Identifying Physical Withholding

a) The following initial thresholds will be employed by the NYISO 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
- (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);

b) The amounts of generating capacity considered withheld for purposes of applying the foregoing thresholds shall include unjustified deratings, and the portions of a generating unit's output that is not bid or subject to economic withholding. The amounts deemed withheld shall not include generating output that is subject to a forced outage or capacity that is out of service for maintenance in accordance with an NYISO maintenance schedule, subject to verification by the NYISO as may be appropriate that an outage was forced.

c) A transmission facility shall be deemed physically withheld if it is not operated in accordance with NYISO instructions and such failure to conform to NYISO instructions causes or contributes to transmission congestion. A transmission facility shall not be deemed withheld if it is subject to a forced outage or is out of service for maintenance in accordance with a NYISO maintenance schedule.

3.1.2. Thresholds for Identifying Economic Withholding

a) The following thresholds shall be employed by the NYISO to identify economic withholding that may warrant the imposition of a mitigation measure, and shall be determined with respect to a reference level determined as specified in Section 3.1.4:

- (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.

3.1.3. Thresholds for Identifying Uneconomic Production

a) The following threshold will be employed by the NYISO to identify uneconomic production that may warrant the imposition of a mitigation measure:

- (1) Energy scheduled at an LBMP that is less than 20 percent of the applicable reference level and causes or contributes to transmission congestion; or
- (2) Real-time output from a generating unit that exceeds 110 percent of the NYISO's real-time dispatch instruction (i.e., basepoint), and causes or contributes to transmission congestion.

3.1.4. Reference Levels

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.

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.

3.2. Material Price Effects or Changes in Guarantee Payments

a) 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) When it has the capability to do so, the Market Monitoring Unit, in consultation with the Market Advisor, shall determine the effect on prices or guarantee payments of questioned conduct through the use of sensitivity analyses performed using the NYISO's Security Constrained Unit Commitment computer model ("SCUC") or the NYISO's Security Constrained Dispatch computer model ("SCD"), and such other computer modeling or analytic methods as the Market Monitoring Unit or the Market Advisor shall deem appropriate. Pending development of the capability to use the SCUC or SCD models, the Market Monitoring Unit, in consultation with the Market Advisor, shall determine the effect on prices or guarantee payments of questioned conduct using the best available data and such models and methods as they shall deem appropriate.

c) In addition, the NYISO shall make a filing under § 205 with the Commission seeking authorization to apply an appropriate mitigation measure to conduct that departs significantly from the conduct that would be expected under competitive market conditions but does not rise to the thresholds specified in sections 3.1.1 through 3.1.3 above if that conduct has a significant effect on market prices or guarantee payments as specified below, unless the NYISO determines, from information provided by the Market Party or Parties that would be subject to mitigation or other information available to the NYISO that the conduct and associated price or guarantee payments are attributable to legitimate competitive market forces or incentives. For purposes of this section, conduct shall be deemed to have an effect on market prices or guarantee payments that is significant if it exceeds one of the following thresholds:

- (1) an increase of 100 percent 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 100 percent in guarantee payments to a Market Party for a day.

3.3. Consultation with a Market Party

If through the application of an appropriate index or screen or other monitoring of market conditions, conduct is identified that (i) exceeds an applicable threshold, and (ii) has a material effect, as specified above, on one or more prices or guarantee payments in a New York Electric Market administered by the NYISO, the Market Monitoring Unit shall, as and to the extent specified in the Plan, contact the Market Party engaging in the identified conduct to request an explanation of the conduct. If the explanation indicates to the satisfaction of the NYISO, in consultation with the Market Advisor, that the questioned conduct is consistent with competitive behavior, no further action will be taken.

4. MITIGATION MEASURES

4.1. Purpose

If conduct is detected that meets the criteria specified in Section 3, the appropriate mitigation measure described in this Section shall be applied by the NYISO. The conduct specified in Sections 3.1.1 to 3.1.3 shall be remedied by the prospective application of a default bid measure as described in Section 4.2. If a bidding entity engages in physical withholding by providing the NYISO false information regarding the derating or outage of an Electric Facility or does not operate a generating unit in conformance with NYISO dispatch instructions such that the prospective application of a default bid is not feasible, the NYISO shall apply the sanction described in Section 4.3.

4.2. Default Bid

4.2.1. Purpose

A default bid shall be designed to cause a Market Party to bid as if it faced workable competition during a period when (i) the Market Party does not face workable competition, and (b) has responded to such condition by engaging in the physical or economic withholding of an Electric Facility. In designing and implementing default bids, the NYISO shall seek to avoid causing an Electric Facility to bid below its marginal cost.

4.2.2. Implementation

a) If the criteria contained in Section 3 are met, the NYISO may substitute a default bid for a bid submitted for an Electric Facility. The default bid shall establish a maximum or minimum value for one or more components of the submitted bid, equal to a reference level for that component determined as specified in Section 3.1.4.

b) An Electric Facility subject to a default bid shall be paid the LBMP or other market clearing price applicable to the output from the facility. Accordingly, a default bid shall not limit the price that a facility may receive unless the default bid determines the LBMP or other market clearing price applicable to that facility.

c) The NYISO shall not use a default bid to determine revised market clearing prices for periods prior to the imposition of the default bid, except as may be specifically authorized by the Commission.

4.3. Mitigation Measure for Physical Withholding or Over-production

a) If the NYISO determines that (i) a Market Party has engaged in physical withholding by providing the NYISO false information regarding the derating or outage of an Electric Facility, or (ii) a Market Party has failed to operate a generating unit in conformance with NYISO dispatch instructions, and such conduct has caused a material increase in one or more prices or guarantee payments in a New York Electric Market administered by the NYISO, the NYISO may impose a financial obligation equal to:

Capacity withheld or amount of output deviation (MW) * Real-Time LBMP for each hour the resource was withheld.

b) The Real-Time LBMP to be used for physical withholding of generation will be the price at the withheld generating unit's location. The Real-Time LBMP to be used for the physical withholding of a transmission facility or for over-production from a generating unit will be the Real-Time LBMP that was increased the most, in absolute terms (dollars per MWh), as a result of the conduct.

c) Real-Time LBMPs shall not be revised as a result of the imposition of a financial obligation as specified in this section, except as may be specifically authorized by the Commission.

d) The financial obligation shall be doubled when it is being applied to a Market Party that has been subject to this mitigation measure more than twice in the previous 12 month period.

4.4. Load Bid Measure

4.4.1. Purpose

As initially implemented, the NYISO market rules allow loads to choose to purchase power in either the Day-Ahead Market or in the Real-Time Market, but provide other Market Parties less flexibility in opting to sell their output in the Real-Time Market. As a result of this and other design features, certain bidding practices may cause Day-Ahead LBMPs not to achieve the degree of convergence with Real-Time LBMPs that would be expected in a workably competitive market. A temporary mitigation measure is specified below as an interim remedy if conditions warrant action by the NYISO until such time as the NYISO develops and implements an effective long-term remedy, if needed. These measures shall only be imposed if persistent unscheduled load causes operational problems, including but not limited to an inability to meet unscheduled load with available resources. The NYISO shall post a description of any such operational problem on its web site.

4.4.2. Implementation

a) Day-Ahead LBMPs and Real-Time LBMPs in each load zone shall be monitored to determine whether there is a persistent hourly deviation between them in any zone that would not be expected in a workably competitive market.

b) The NYISO shall compute the average hourly deviation between day-ahead and real-time zone prices, measured as: $(\text{Zone Price}_{\text{real time}} / \text{Zone Price}_{\text{day ahead}}) - 1$. The average hourly deviation shall be computed over a rolling eight week period or such other period determined by the NYISO to be appropriate to achieve the purpose of this mitigation measure.

c) The NYISO shall also estimate and monitor the average percentage of each Load Serving Entity's load scheduled in the Day-Ahead Market, using a methodology intended to identify a sustained pattern of under-bidding as accurately as the NYISO deems practicable. The average percentage will be computed over a specified time period determined by the NYISO to be appropriate to achieve the purpose of this mitigation measure.

d) If the NYISO determines that (i) the relationship between zonal LBMPs in a zone in the Day-Ahead Market and the Real-Time Market is not what would be expected under conditions of workable competition, (ii) one or more Load Serving Entities have been meeting a substantial portion of their loads with purchases in the Real-Time Market, and (iii) that this

practice has contributed to an unwarranted divergence of LBMP between the two markets, then the following mitigation measure may be imposed. Any such measure shall be rescinded upon a determination by the NYISO that any one or more of the foregoing conditions is not met.

4.4.3. Description of the Measure

a) The NYISO may require a Load Serving Entity engaging in the purchasing practice described above to purchase or schedule all of its expected power requirements in the Day-Ahead Market. A Load Serving Entity subject to this requirement may purchase up to a specified portion of its actual load requirements (the “Allowance Level”) in the Real-Time Market without penalty, as determined by the NYISO to be appropriate in recognition of the uncertainty of load forecasting.

b) Effective with the imposition of the foregoing requirement, all purchases in the Real-Time Market in excess of this Allowance Level (the “Penalty Level”) shall be settled at a specified premium over the applicable zone LBMP. Revenues from such premiums, if any, shall be rebated on a *pro rata* basis to the Market Parties that scheduled energy for delivery to load within New York in the Day-Ahead Market for the day in which the revenues were collected.

c) The Allowance Level and the Penalty Level shall be established by the NYISO at levels deemed effective and appropriate to mitigate the market effects described in this Section 4.4. In addition, the Penalty Level payments shall be waived in any hour in which the Allowance Level is exceeded because of unexpected system conditions.

4.5. Installed Capability Market Mitigation Measures

If and to the extent that sufficient installed capability is not under a contractual obligation to be available to serve load in New York and if physical or economic withholding of installed capability would be likely to result in a material change in the price for installed capability in all or some portion of New York, the NYISO, in consideration of the comments of the Market Parties and other interested parties, shall amend this Addendum, in accordance with the procedures and requirements for amending the Plan, to implement appropriate mitigation measures for installed capability markets.

4.6. Duration of Mitigation Measures

Any mitigation measure imposed as specified above shall expire not later than six months after the occurrence of the conduct giving rise to the measure, or at such earlier time as may be specified by the NYISO.

5. OTHER MITIGATION MEASURES

5.1. In-City Mitigation Measures

In addition to any mitigation measures specified above, the NYISO shall administer, and apply when appropriate in accordance with their terms, the mitigation measures for Arthur Kill Units 2 and 3, the Arthur Kill Gas Turbine, the Astoria Gas Turbines, Ravenswood Units 1, 2 and 3, the Ravenswood Gas Turbines, Astoria Units 3, 4, and 5, Waterside Units 6, 8, and 9, East

River Units 6 and 7, the Gowanus Gas Turbines and the Narrows Gas Turbines, as approved by the FERC in Docket No. ER98-3169-000 or any successor docket.

5.2. FERC-Ordered Measures

In addition to any mitigation measures specified above, the NYISO shall administer, and apply when appropriate in accordance with their terms, such other mitigation measures as it may be directed to implement by order of the FERC.

6. DISPUTE RESOLUTION

If a Market Party has reasonable grounds to believe that it has been adversely affected because a Mitigation Measure has been improperly applied or withheld, it may seek a determination in accordance with the dispute resolution provisions of the New York Independent System Operator Agreement whether, under the standards and procedures specified above and in the Plan, the imposition of a Mitigation Measure was or would have been appropriate. In no event, however, shall the NYISO be liable to a Market Party or any other person or entity for money damages or any other remedy or relief except and to the extent specified in the Plan.

7. EFFECTIVE DATE

These Mitigation Measures shall be effective as of the date they are approved by the FERC, or as specified in any Temporary Extraordinary Procedures approved by FERC for implementation coincident with the initiation of the New York Electric Markets administered by the NYISO.

