

## **23.4. Mitigation Measures**

### **23.4.1. Purpose**

If conduct is detected that meets the criteria specified in Section 23.3, the appropriate mitigation measure described in this Section shall be applied by the ISO. The conduct specified in Sections 23.3.1.1 to 23.3.1.3 shall be remedied by (1) the prospective application of a default bid measure, or (2) the application of a default bid to correct guarantee payments, as further described in Section 23.4.2.2.4, below. If a Market Party or its Affiliates engage in physical withholding by providing the ISO false information regarding the derating or outage of an Electric Facility or does not operate a Generator in conformance with ISO dispatch instructions such that the prospective application of a default bid is not feasible, or if otherwise appropriate to deter either physical or economic withholding, the ISO shall apply the sanction described in Section 23.4.3.

### **23.4.2 Default Bid**

#### **23.4.2.1 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 ISO shall seek to avoid causing an Electric Facility to bid below its marginal cost.

#### **23.4.2.2 Implementation**

23.4.2.2.1 If the criteria contained in Section 23.3 are met, the ISO 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 23.3.1.4.

23.4.2.2.2 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.

23.4.2.2.3 If an Electric Facility is mitigated to a default bid for an Incremental Energy Bid other than a default bid determined as specified in Section 23.3.1.4, the Electric Facility shall receive an additional payment for each interval in which such mitigation occurs equal to the product of: (i) the amount of Energy in that interval scheduled or dispatched to which the incorrect default bid was applied; (ii) the difference between (a) the lesser of the applicable unmitigated bid and a default bid determined in accordance with Section 23.3.1.4, and (b) the applicable LBMP or other relevant market price in each such interval, if (a) greater than (b), or zero otherwise; and (iii) the length of that interval.

23.4.2.2.4 Except as may be specifically authorized by the Commission:

23.4.2.2.4.1 The ISO shall not use a default bid to determine revised market clearing prices for periods prior to the imposition of the default bid.

23.4.2.2.4.2 The ISO shall only be permitted to apply default bids to determine revised real-time guarantee payments to a Market Party in accordance with the provisions of Section 23.3.3.3 of these Mitigation Measures.

23.4.2.2.5 Automated implementation of default bid mitigation measures shall be subject to the following requirements.

23.4.2.2.5.1 Automated mitigation procedures shall not be applied to hydroelectric resources or External Generators. In addition, except as specified below the following shall not be mitigated on an automated basis: (i) bids by a Market Party or its Affiliates that together have bidding control over 50 MW or less of capacity; or (ii) bids by a Market Party or its Affiliates that together have bidding control over 50 MW or more of capacity if the bids by such entities that meet the applicable conduct test for mitigation are for an amount of capacity that totals 50 MW or less. The foregoing exemptions shall be reduced or discontinued for any Market Party or its Affiliates determined by the ISO, after consulting with the Market Party as specified in Section 23.3.3, to be submitting bids that constitute economic withholding that has a significant effect on prices or guarantee payments. The foregoing exemptions shall not apply to mitigation imposed pursuant to Sections 23.3.1.2.2 and 23.3.2.1.3 of this Attachment H.

23.4.2.2.5.2 Automated mitigation measures shall not be applied if the price effects of the measures would cause the average day-ahead energy price in the mitigated locations or zones to rise over the entire day.

23.4.2.2.5.3 Automated mitigation measures as specified in Section 23.3.2.2.3 shall be applied to Minimum Generation Bids and start-up costs Bids meeting the applicable conduct and impact tests. When mitigation of Minimum Generation Bids is warranted, mitigation shall be imposed from the first hour in which the

impact test is met to the last hour in which the impact test is met, or for the duration of the mitigated Generator's minimum run time, whichever is longer.

23.4.2.2.5.4 The posting of the Day-Ahead schedule may be delayed if necessary for the completion of automated mitigation procedures.

23.4.2.2.5.5 Bids not mitigated under automated procedures shall remain subject to mitigation by other procedures specified herein as may be appropriate.

23.4.2.2.5.6 The role of automated mitigation measures in the determination of market clearing prices are described in Section 17.1.1.5 of Attachment B of the ISO Services Tariff and Section 16.1.1.5 of Attachment J of the ISO OATT.

23.4.2.2.6 A Real-Time automated mitigation measure shall remain in effect for the duration of any hour in which there is an RTC interval for which such mitigation is deemed warranted.

23.4.2.2.7 A default bid shall not be imposed on a Generator that is not in the New York Control Area and that is electrically interconnected with another Control Area.

### **23.4.3 Sanctions**

#### **23.4.3.1 Types of Sanctions**

The ISO may impose financial penalties on a Market Party in amounts determined as specified below.

#### **23.4.3.2 Imposition**

The ISO shall impose financial penalties as provided in this Section 23.4.3, if the ISO determines in accordance with the thresholds and other standards specified in this Attachment H

that: (i) a Market Party has engaged in physical withholding, including providing the ISO false information regarding the derating or outage of an Electric Facility; or (ii) a Market Party or its Affiliates have failed to follow the ISOs dispatch instructions in real-time, resulting in a different output level than would have been expected had the Market Party's or the Affiliate's generation followed the ISO's dispatch instructions, and such conduct has caused a material increase in one or more prices or guarantee payments in an ISO Administered Market; or (iii) a Market Party has made unjustifiable changes to one or more operating parameters of a Generator that reduce its ability to provide Energy or Ancillary Services; or (iv) a Load Serving Entity has been subjected to a Penalty Level payment in accordance with Section 23.4.4 below; or (v) a Market Party has submitted inaccurate fuel type or fuel price information that is used by the ISO in the development of a Generator's reference level, where the inaccurate reference level that is developed, in turn, directly or indirectly impacts guarantee payments or market clearing prices paid to the Market Party; or (vi) the opportunity to submit Incremental Energy Bids into the real-time market that exceed Incremental Energy Bids made in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriate, has been revoked for a Market Party's Generator pursuant to Sections 23.4.7.2 and 23.4.7.3 of these Mitigation Measures.

### **23.4.3.3 Base Penalty Amount**

23.4.3.3.1 Except for financial penalties determined pursuant to Sections 23.4.3.3.2, 23.4.3.3.3, and 23.4.3.3.4 below, financial penalties shall be determined by the product of the Base Penalty Amount, as specified below, times the appropriate multiplier specified in Section 23.4.3.4:

MW meeting the standards for mitigation during Mitigated Hours \* Penalty  
LBMP.

23.4.3.3.1.1 For purposes of determining a Base Penalty Amount, the term “Mitigated Hours” shall mean: (i) for a Day-Ahead Market, the hours in which MW were withheld; (ii) for a Real-Time Market, the hours in the calendar day in which MW were withheld; and (iii) for load bids, the hours giving rise to Penalty Level payments.

23.4.3.3.1.2 For purposes of determining a Base Penalty Amount, the term “Penalty LBMP” shall mean: (i) for a seller, the LBMP at the generator bus of the withheld resource; and (ii) for a Load Serving Entity, its zonal LBMP.

23.4.3.3.2 The financial penalty for failure to follow ISOs dispatch instructions in real-time, resulting in real-time operation at a different output level than would have been expected had the Market Party’s or the Affiliate’s generation followed the ISO’s dispatch instructions, if the conduct violates the thresholds set forth in Sections 23.3.1.1.1.2, or 23.3.1.3.1.2 of these Mitigation Measures, and if a Market Party or its Affiliates, or at least one Generator, is determined to have had impact in accordance with Section 23.3.2.1 of these Mitigation Measures, shall be:

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

23.4.3.3.3 If inaccurate fuel type and/or fuel price information was submitted by or for a Market Party, and the reference level that the ISO developed based on that inaccurate information impacted guarantee payments or market clearing prices

paid to the Market Party in a manner that violates the thresholds specified in this Section 23.4.3.3.3, then, following consultation with the Market Party regarding the appropriate fuel type and/or fuel price, the ISO shall apply the penalty set forth below, unless: (i) the Market Party shows, to the satisfaction of the ISO, with review and comment by the Market Monitoring Unit, that its actions were consistent with competitive conduct (in which case no penalty is appropriate), or (ii) the total penalty calculated for a particular Day-Ahead or Real-Time Market day is less than \$10,000 (in which case the ISO may elect to apply a penalty calculated in the manner specified below). The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.8 of the Plan.

#### 23.4.3.3.3.1 Day-Ahead Conduct and Market Impact Tests

##### 23.4.3.3.3.1.1 Day-Ahead Conduct Test

Using the higher of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for the submission of inaccurate fuel type and/or fuel price information, test the Bids to determine if they violate the relevant conduct threshold in accordance with the appropriate provision(s) of Section 23.3.1.2 of these Mitigation Measures.

##### 23.4.3.3.3.1.2 Day-Ahead Impact Test

Using the higher of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for the submission of inaccurate fuel type and/or fuel price

information, test the Bids for both LBMP and guarantee payment impact in accordance with the appropriate provisions of Section 23.3.2.1 of these Mitigation measures.

#### 23.4.3.3.3.2 Real-Time Conduct and Market Impact Tests

##### 23.4.3.3.3.2.1 Real-Time Conduct Test

Using the higher of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for the submission of inaccurate fuel type and/or fuel price information, test the Bids to determine if they violate the relevant conduct threshold in accordance with the appropriate provision(s) of Section 23.3.1.2 of these Mitigation Measures

##### 23.4.3.3.3.2.2 Real-Time LBMP Impact Test

The Market Party's Bids for a Generator will be treated as having a Real-Time Market LBMP impact if the higher of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for a Market Party's submission of inaccurate fuel type and/or fuel price information, is less than or equal to the real-time LBMP at the PTID that represents the Generator's location, and the Generator's reference level that was actually used to test the Bid for LBMP impact in the Real-Time Market for that hour was greater than or equal to the LBMP at the Generator's location.



#### 23.4.3.3.2.3 Real-Time Guarantee Payment Impact Test

Using the greater of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for the submission of inaccurate fuel type and/or fuel price information, test the Bids for guarantee payment impact in accordance with the appropriate provisions of Section 23.3.2.1 of these Mitigation Measures.

#### 23.4.3.3.3 Day-Ahead Market Penalty Calculation

If the results of the Day-Ahead Market impact test indicate that the Market Party's Bid had either LBMP or guarantee payment impact, and the Market Party is not able to show that its submission of inaccurate fuel price information was consistent with competitive conduct, then the ISO shall charge the Market Party a penalty, calculated for each penalized day, for each of its Generators, for each hour of the day, as follows:

$$\text{Daily Penalty} = \max \left[ (\text{Multiplier} * [\sum_g \blacktriangle \text{Day-Ahead BPCG payment}_g] + (\text{Multiplier}) \sum_h \sum_g ([\text{Market Party MWh}_{gh}] \times [\blacktriangle \text{Day Ahead LBMP}@PTID_{gh}]) + \max [\sum_h \text{TCC Revenue Calc for Market Party}_h, 0]), 0 \right]$$

Where:

g = an index running across all the Market Party's Generators

h = for purposes of this Section 23.4.3.3, h is an index running across all hours of the day

Multiplier = a factor that may range between 1.0 and 1.5. The ISO shall consider the facts and circumstances presented by the Market Party when determining the appropriate multiplier to use

▲ Day-Ahead BPCG payment<sub>g</sub> = the change in the Day-Ahead Market guarantee payment that the Market Party receives for Generator g determined when the ISO performs the Day Ahead Market guarantee payment impact test in accordance with Section 23.3.2.1.2 of these Mitigation Measures

Market Party MWh<sub>gh</sub> = the MWh of Energy scheduled in the Day-Ahead Market for Generator g in hour h

▲ Day Ahead LBMP@PTID<sub>gh</sub> = the change in the Day-Ahead Market LBMP for hour h at the location of Generator g, as determined when the ISO performs the relevant Day Ahead Market LBMP impact test in accordance with Section 23.3.2.1.1 or 23.3.2.1.3 of these Mitigation Measures

TCC Revenue Calc for Market Party<sub>h</sub> = the change in TCC Revenues that the Market Party receives for hour h, determined when the ISO performs the relevant Day Ahead Market LBMP impact test

#### 23.4.3.3.3.4 Real-Time Market Penalty Calculation

If the results of either of the Real-Time Market impact tests indicate that the Incremental Energy Bid submitted for a Market Party's Generator had either LBMP or guarantee payment impact, and the Market Party is not able to show that its submission of inaccurate fuel price information was consistent with competitive conduct, then the ISO shall charge the Market Party a penalty, calculated for each penalized day, for each of its Generators, for each hour of the day, as follows:

$$\text{Daily Penalty} = \text{Max} [(\text{Multiplier} * \sum_g [\text{▲ simplified guarantee payment}_g]) + \sum_h \sum_g (\text{Multiplier} * [\text{updated reference level}_{gh} - \text{original reference level}_{gh}]) * \text{max} [\text{MWh DAM}_{gh}, \text{MWh RT}_{gh}, \text{Market Party MWh}_{gh}, 0], 0]$$

Where

$g$  = an index running across all the Market Party's Generators

$h$  = an index running across all hours of the day in which inaccurate fuel type or fuel price information was supplied for any of the Market Party's Generators; provided that one of the Bids in that hour " $h$ " for at least one of the Market Party's Generators must have had a Real Time Market LBMP or guarantee payment impact in accordance with Sections 23.4.3.3.2.2 or 23.4.3.3.2.3 of these Mitigation Measures

Multiplier = a factor that may range between 1.0 and 1.5. The ISO shall consider the facts and circumstances presented by the Market Party when determining the appropriate multiplier to use.

Updated reference level $_{gh}$  = greater of a revised reference level calculated using the actual fuel costs of Generator  $g$  in hour  $h$ , or the reference level that would have been in place for the Generator in hour  $h$ , but for the Market Party's submission of inaccurate fuel type and/or fuel price information

Original reference level $_{gh}$  = the reference level for Generator  $g$  in hour  $h$  actually used in the Real-Time Market to perform conduct and impact testing of the Market Party's Bids

MWh DAM $_{gh}$  = the MWh that Generator  $g$  was scheduled to produce in the Day-Ahead Market in hour  $h$

$MWh_{RT_{gh}}$  = the MWh that Generator g was scheduled to produce in the Real-Time Market in hour h

Market Party  $MWh_{gh}$  = MWh produced by Market Party's Generator g that was scheduled to produce energy in hour h in the Real-Time Market

▲ simplified guarantee payment<sub>g</sub> = the change in the Real-Time Market guarantee payment that the Market Party receives for Generator g, determined when the ISO performs a simplified Bid Production Cost guarantee payment impact test using the threshold specified in Section 23.3.2.1.2 of these Mitigation Measures. The simplified guarantee payment shall be based upon actual Real-Time Bids, actual Real-Time Generator LBMPs, and reference levels that are the greater of (a) a revised reference level calculated using the Generator's actual fuel costs, or (b) the reference level that would have been in place for the Generator but for the submission of inaccurate fuel type and/or fuel price information

23.4.3.3.4 If the opportunity to submit Incremental Energy Bids into the real-time market that exceed Incremental Energy Bids made in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriate, has been revoked on a Market Party's Generator pursuant to Sections 23.4.7.2 and 23.4.7.3 of these Mitigation Measures, then the following virtual market penalty may be imposed on the Market Party:

Virtual market penalty = (Virtual Load MWs) \* (Amount by which the hourly integrated real-time LBMP exceeds the day-ahead LBMP applicable to the Virtual Load MWs)

WHERE:

Virtual Load MWs are the scheduled MWs of Virtual Load bid by the Market Party in the hour for which an increased real-time Bid for the Market Party's Generator failed the test specified in Section 23.4.7.2 of these Mitigation Measures; and

LBMP is the LBMP at which the Virtual Load MWs settled in the Day-Ahead and real-time Markets.

23.4.3.3.5 Real-Time LBMPs shall not be revised as a result of the imposition of a financial obligation as specified in this Section 23.4.3.3, except as may be specifically authorized by the Commission.

#### **23.4.3.4 Multipliers**

The Base Penalty Amount specified in Section 23.4.3.3.1 shall be subject to the following multipliers:

23.4.3.4.1 For the first instance of a type of conduct by a Market Party meeting the standards for mitigation, the multiplier shall be one (1).

23.4.3.4.2 For the second instance within the current or the two immediately previous capability periods of substantially similar conduct in the same market by a Market Party or its Affiliates, the multiplier shall be one (1),

23.4.3.4.3 For the third instance within the current or the two immediately previous capability periods of substantially similar conduct in the same market by a Market Party or its Affiliates, the multiplier shall be two (2),

23.4.3.4.4 For the fourth or any additional instance within the current or immediately previous capability period of substantially similar conduct in the same market by a Market Party or its Affiliates, the multiplier shall be three (3).

#### **23.4.3.5 Dispute Resolution**

23.4.3.5.1 The exclusive means for the resolution of disputes arising from or relating to the imposition of a sanction under this Section 23.4.3 shall be the dispute resolution provisions of Attachment O and this Attachment H. The scope of any such proceeding shall include resolution of any dispute as to legitimate justifications, under applicable legal, regulatory or policy standards, for any conduct that is asserted to warrant a penalty. Any or all of the issues in any such proceeding may be resolved by agreement of the parties.

23.4.3.5.2 Payment of a financial penalty may be withheld pending conclusion of any arbitration or other alternate dispute resolution proceeding instituted pursuant to the preceding paragraph and any petition to FERC for review under the Federal Power Act of the determination in such dispute resolution proceeding; provided, however, that interest at the ISO's average cost of borrowing shall be payable on the amount of any unpaid penalty from the date of the infraction giving rise to the penalty to the date of payment. The exclusive remedy for the imposition of a financial penalty, to the exclusion of any claim for damages or any other form of relief, shall be a determination that a penalty should not have been imposed, and a refund with interest of paid amounts of a penalty determined to have been improperly imposed, as may be determined in the applicable dispute resolution proceedings.

23.4.3.5.3 This Section 23.4.3 shall not be deemed to provide any right to damages or any other form of relief that would otherwise be barred by Section 30.11 of Attachment O or Section 23.6 of this Attachment H.

23.4.3.5.4 This Section 23.4.3 shall not restrict the right of any party to make such filing with the Commission as may otherwise be appropriate under the Federal Power Act.

#### **23.4.3.6 Disposition of Penalty Funds**

Except as specified in Section 23.4.4.3.2, amounts collected as a result of the imposition of financial penalties shall be credited against costs collectable under Rate Schedule 1 of the ISO Services Tariff.

### **23.4.4 Load Bid Measure**

#### **23.4.4.1 Purpose**

As initially implemented, the ISO 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 ISO until such time as the ISO 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 ISO shall post a description of any such operational problem on its web site.

#### **23.4.4.2 Implementation**

23.4.4.2.1 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.

23.4.4.2.2 The ISO 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 ISO to be appropriate to achieve the purpose of this mitigation measure.

23.4.4.2.3 The ISO 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 ISO deems practicable. The average percentage will be computed over a specified time period determined by the ISO to be appropriate to achieve the purpose of this mitigation measure.

23.4.4.2.4 If the ISO 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 ISO that any one or more of the foregoing conditions is not met.



### **23.4.4.3 Description of the Measure**

23.4.4.3.1 The ISO 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 ISO to be appropriate in recognition of the uncertainty of load forecasting.

23.4.4.3.2 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.

23.4.4.3.3 The Allowance Level and the Penalty Level shall be established by the ISO at levels deemed effective and appropriate to mitigate the market effects described in this Section 23.4.4. In addition, the Penalty Level payments shall be waived in any hour in which the Allowance Level is exceeded because of unexpected system conditions.

### **23.4.5 Installed Capacity Market Mitigation Measures**

23.4.5.1 If and to the extent that sufficient installed capacity is not under a contractual obligation to be available to serve load in New York and if physical or economic withholding of installed capacity would be likely to result in a material change in the price for installed capacity in all or some portion of New York, the

ISO, in consideration of the comments of the Market Parties and other interested parties, shall amend this Attachment H, in accordance with the procedures and requirements for amending the Plan, to implement appropriate mitigation measures for installed capacity markets.

23.4.5.2 Offers to sell Mitigated UCAP in an ICAP Spot Market Auction shall not be higher than the higher of (a) the UCAP Offer Reference Level for the applicable ICAP Spot Market Auction, or (b) the Going-Forward Costs of the Installed Capacity Supplier supplying the Mitigated UCAP.

23.4.5.3 An Installed Capacity Supplier's Going-Forward Costs for an ICAP Spot Market Auction shall be determined upon the request of the Responsible Market Party for that Installed Capacity Supplier. The Going-Forward Costs shall be determined by the ISO after consultation with the Responsible Market Party, provided such consultation is requested by the Responsible Market Party not later than 50 business days prior to the deadline for offers to sell Unforced Capacity in such auction, and provided such request is supported by a submission showing the Installed Capacity Supplier's relevant costs in accordance with specifications provided by the ISO. Such submission shall show (1) the nature, amount and determination of any claimed Going-Forward Cost, and (2) that the cost would be avoided if the Installed Capacity Supplier is taken out of service or retired, as applicable. If the foregoing requirements are met, the ISO shall determine the level of the Installed Capacity Supplier's Going-Forward Costs and shall seasonally adjust such costs not later than 7 days prior to the deadline for submitting offers to sell Unforced Capacity in such auction. A Responsible

Market Party shall request an updated determination of an Installed Capacity Supplier's Going-Forward Costs not less often than annually, in the absence of which request the Installed Capacity Supplier's offer cap shall revert to the UCAP Offer Reference Level. An updated determination of Going-Forward Costs may be undertaken by the ISO at any time on its own initiative after consulting with the Responsible Market Party. Any redetermination of an Installed Capacity Supplier's Going-Forward Costs shall conform to the consultation and determination schedule specified in this paragraph. The costs that an Installed Capacity Supplier would avoid as a result of retiring should only be included in its Going-Forward Costs if the owner or operator of that Installed Capacity Supplier actually plans to mothball or retire it if the Installed Capacity revenues it receives are not sufficient to cover those costs.

23.4.5.4 Mitigated UCAP shall be offered in each ICAP Spot Market Auction in accordance with Section 5.14.1.1 of the ISO Services Tariff and applicable ISO procedures, unless it has been exported to an External Control Area or sold to meet Installed Capacity requirements outside the New York City Locality in a transaction that does not constitute physical withholding under the standards specified below.

23.4.5.4.1 An export to an External Control Area or sale to meet an Installed Capacity requirement outside the New York City Locality of Mitigated UCAP (either of the foregoing being referred to as "External Sale UCAP") may be subject to audit and review by the ISO to assess whether such action constituted physical withholding of UCAP from the New York City Locality. External Sale

UCAP shall be deemed to have been physically withheld on the basis of a comparison of the net revenues from UCAP sales that would have been earned by the sale in the New York City Locality of External Sale UCAP. The comparison shall be made for the period for which Installed Capacity is committed (the “Comparison Period”) in each of the shortest term organized capacity markets (the “External Reconfiguration Markets”) for the area and during the period in which the Mitigated UCAP was exported or sold. External Sale ICAP shall be deemed to have been withheld from the New York City Locality if: (1) the Responsible Market Party for the External Sale UCAP could have made all or a portion of the External Sale UCAP available to be offered in the New York City Locality by buying out of its external capacity obligation through participation in an External Reconfiguration Market; and (2) the net revenues over the Comparison Period from sale in the New York City Locality of the External Sale UCAP that could have been made available for sale in that Locality would have been greater by 15% or more, provided that the net revenues were at least \$2.00/kilowatt-month more than the net UCAP revenues from that portion of the External Sale UCAP over the Comparison Period.

23.4.5.4.2 If Mitigated UCAP is not offered or sold as specified above, the Responsible Market Party for such Installed Capacity Supplier shall pay the ISO an amount equal to the product of (A) 1.5 times the difference between the Market-Clearing Price for the New York City Locality in the ICAP Spot Market Auction with and without the inclusion of the Mitigated UCAP and (B) the total of (1) the amount of Mitigated UCAP not offered or sold as specified above, and

(2) all other megawatts of Unforced Capacity in the New York City Locality under common Control with such Mitigated UCAP, and if the failure to offer was associated with or the same period as the sale of External Sale UCAP, and the failure caused or contributed to an increase in UCAP prices in the New York City Locality of 15 percent or more, provided such increase is at least \$2.00/kilowatt-month, the Responsible Market Party for such Installed Capacity Supplier shall be required to pay to the ISO an amount equal to 1.5 times the lesser of (A) the difference between the average Market-Clearing Price for the New York City Locality in the ICAP Spot Market Auctions for the relevant Comparison Period with and without the inclusion of the ~~Export~~External Sale UCAP in those auctions, or (B) the difference between such average price and the clearing price in the External Reconfiguration Market for the relevant Comparison Period, times the total of (1) the amount of Mitigated UCAP not offered or sold as specified above, and (2) all other megawatts of Unforced Capacity in the New York City Locality under common Control with such Mitigated UCAP. The ISO will distribute any amounts recovered in accordance with the foregoing provisions among the LSEs serving Loads in regions affected by the withholding in accordance with ISO Procedures.

23.4.5.4.3 Reasonably in advance of the deadline for submitting offers in an External Reconfiguration Market ~~and in accordance with the deadlines specified in ISO Procedures,~~ the Responsible Market Party for External Sale UCAP may request the ISO to provide a projection of ICAP Spot Auction clearing prices for the New York City Locality over the Comparison Period for the External Reconfiguration

Market. Such requests, and the ISO's response, shall be made in accordance with the deadlines specified in ISO Procedures. Prior to completing its projection of ICAP Spot Auction clearing prices for the New York City Locality over the Comparison Period for the External Reconfiguration Market, the ISO shall consult with the Market Monitoring Unit regarding such price projection. The Responsible Market Party shall be exempt from a physical withholding penalty as specified in Section 23.4.5.4.2, below, if at the time of the deadline for submitting offers in an External Reconfiguration Market its offers, if accepted, would reasonably be expected to produce net revenues from External UCAP Sales that would exceed the net revenues that would have been realized from sale of the External UCAP Sales capacity in the New York City Locality at the ICAP Spot Auction prices projected by the ISO. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.10 of Attachment O.

23.4.5.5 Control of Unforced Capacity shall be rebuttably presumed from (i) ownership of an Installed Capacity Supplier, or (ii) status as the Responsible Market Party for an Installed Capacity Supplier, but may also be determined on the basis of other evidence. The presumption of Control from ownership can be rebutted by either: (1) the sale of Unforced Capacity from the Installed Capacity Supplier in a Capability Period Auction or a Monthly Auction, or (2) demonstrating to the reasonable satisfaction of the ISO; provided, however, that if the presumption has not been rebutted, and if two or more Market Parties each have rights or obligations with respect to Unforced Capacity from an Installed

Capacity Supplier that could reasonably be anticipated to affect the quantity or price of Unforced Capacity transactions in an ICAP Spot Market Auction, the ISO may attribute Control of the affected MW of Unforced Capacity from the Installed Capacity Supplier to each such Market Party. Prior to reaching its decision regarding whether the presumption of control of Unforced Capacity has been rebutted, the ISO shall provide its preliminary determination to the Market Monitoring Unit for review and comment. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.11 of Attachment O.

23.4.5.6 Any proposal or decision by a Market Participant to retire or otherwise remove an Installed Capacity Supplier from the In-City Unforced Capacity market, or to de-rate the amount of Installed Capacity available from such supplier, may be subject to audit and review by the ISO if the ISO determines that such action could reasonably be expected to affect Market-Clearing Prices in one or more ICAP Spot Market Auctions for the New York City Locality subsequent to such action. Such an audit or review shall assess whether the proposal or decision has a legitimate economic justification or is based on an effort to withhold Installed Capacity physically in order to affect prices. The ISO shall provide the preliminary results of its audit or review to the Market Monitoring Unit for its review and comment. If the ISO determines that the proposal or decision constitutes physical withholding, and would increase Market-Clearing Prices in one or more ICAP Spot Market Auctions for the New York City Locality by five percent or more, provided such increase is at least \$.50/kilowatt-

month, for each such violation of the above requirements the Market Participant shall be assessed an amount ~~unequal~~ equal to the product of (A) 1.5 times the difference between the Market-Clearing Price for the New York City Locality in the ICAP Spot Market Auctions with and without the inclusion of the withheld UCAP in those auctions for each month during which Installed Capacity was withheld, and (B) times the total of (1) the number of megawatts withheld in each month and (2) all other megawatts of Installed Capacity in the New York City Locality under common Control with such withheld megawatts. The requirement to pay such amounts shall continue until the Market Party demonstrates that the removal from service, retirement or de-rate is justified by economic considerations other than the effect of such action on Market-Clearing Prices in the ICAP Spot Market Auctions for the New York City Locality. The ISO will distribute any amount recovered in accordance with the foregoing provisions among the LSEs serving Loads in regions affected by the withholding in accordance with ISO Procedures. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.12 of Attachment O.

23.4.5.7 Unless exempt as specified below, offers to supply Unforced Capacity in an ICAP Spot Market Auction from an In-City Installed Capacity Supplier shall equal or exceed the applicable Offer Floor. The Offer Floors shall apply to offers for Unforced Capacity from the Installed Capacity Supplier, if it is not a Special Case Resource, for each of the six Capability Periods starting with the Capability Period for which the Installed Capacity Supplier first offers to supply UCAP



(“Initial Capability Period”), or the period of years if longer determined by (1) the initial DMNC value of the Installed Capacity Supplier plus the amount of Surplus Capacity at the time the Installed Capacity Supplier first offers to supply UCAP, divided by (2) the average annual growth in MW of the Locational Minimum Installed Capacity Requirement for the New York City Locality over the six Capability Periods preceding the Initial Capability Period. If the foregoing calculation extends mitigation to part of a Capability Period, the entire Capability Period shall be subject an Offer Floor. The initial DMNC value of the Installed Capacity Supplier shall be determined as specified in the ISO’s tariffs and ISO Procedures.

23.4.5.7.1      Unforced Capacity from an Installed Capacity Supplier that is subject to an Offer Floor may not be used to satisfy any LSE Unforced Capacity Obligation for In-City Load unless such Unforced Capacity is obtained through participation in an ICAP Spot Market Auction.

23.4.5.7.2      An Installed Capacity Supplier shall be exempt from an Offer Floor if: (a) any ICAP Spot Market Auction price for the two Capability Periods beginning with the first Capability Period for any part of which the Installed Capacity Supplier is reasonably anticipated to offer to supply UCAP (the “Starting Capability Period”) is projected by the ISO to be higher, with the inclusion of the Installed Capacity Supplier, than the highest Offer Floor based on the Mitigation Net CONE that would be applicable to such supplier in such Capability Periods, or (b) the average of the ICAP Spot Market Auction prices in the six Capability Periods beginning with the Starting Capability Period is projected by the ISO to

be higher, with the inclusion of the Installed Capacity Supplier, than the reasonably anticipated Unit Net CONE of the Installed Capacity Supplier. The Developer or Interconnection Customer may request the ISO to make such determinations upon execution of all necessary Interconnection Facilities Study Agreements for the Installed Capacity Supplier. If relating to the exemption specified in (ii)(b) above, such a request shall include all data available to the requesting entity relating to the reasonably anticipated Unit Net CONE. The ISO shall provide the requesting entity with the relevant price projections, the Offer Floors specified in (ii)(a) above, and the ISO's determination, if applicable, of the reasonably anticipated Unit Net CONE less the costs to be determined in the Project Cost Allocation or Revised Project Cost Allocation, as applicable, not later than the commencement of the Initial Decision Period for the Interconnection Facilities Study to which the Interconnection Facilities Study Agreement applies, provided that all information reasonably necessary to determine the Installed Capacity Supplier's Unit Net CONE has been delivered to the ISO not later than 60 days prior to the commencement of the Initial Decision Period. When evaluating a request by a Developer or Interconnection Customer pursuant to this Section 23.4.5.7, the ISO shall seek comment from the Market Monitoring Unit on matters relating to the determination of price projections and cost calculations. The ISO shall provide revised price projections to a requesting entity proceeding to a Subsequent Decision Period not later than the ISO's issuance of a Revised Project Cost Allocation. The ISO shall inform the requesting entity whether the exemption specified in (b) above is applicable as

soon as practicable after completion of the relevant Project Cost Allocation or Revised Project Cost Allocation, in accordance with methods and procedures specified in ISO Procedures. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.13 of Attachment O.

23.4.5.7.3 If an Installed Capacity Supplier demonstrates to the reasonable satisfaction of the ISO that its Unit Net CONE is less than any Offer Floor that would otherwise be applicable to the Installed Capacity Supplier, then its Offer Floor shall be reduced to a numerical value equal to its Unit Net CONE.

23.4.5.7.4 Mitigation Net CONE for the first two years after the last year covered by the most recent Demand Curves approved by the Commission shall be increased by the escalation factor approved by the Commission for such Demand Curves.

23.4.5.7.5 An In-City Installed Capacity Supplier that is a Special Case Resource shall be subject to an Offer Floor ~~for (A)~~ beginning with the month of its initial offer to supply Installed Capacity, and until its offers of Installed Capacity have been accepted in the ICAP Spot Market Auction at a price at or above its Offer Floor for a total of twelve, not necessarily consecutive, months. ~~(B) its initial offer to supply Installed Capacity following a period of one year or more in which it did not offer to supply Installed Capacity. Responsible Interface Parties shall identify to the ISO any Special Case Resources shall be exempt from the that is subject to an Offer Floor if the ISO projects that the ICAP Spot Market Auction price will exceed, in accordance with ISO Procedures. The Special Case Resource's Offer Floor for the first twelve months that the Special Case Resource~~

reasonably anticipated to offer to supply UCAP. shall continue to be subject to an Offer Floor for the following 11 months, for a total for 12 months. If a Responsible Interface Party fails to provide Special Case Resource data that the ISO needs to conduct the calculations described in the two preceding sentences by the deadline established in ISO Procedures, the Special Case Resource will cease to be eligible to offer or sell Installed Capacity. The Offer Floor for a Special Case Resource shall be equal to the minimum monthly payment for providing Installed Capacity payable by its Responsible Interface Party, plus the monthly value of any payments or other benefits the Special Case Resource receives from a third party for providing Installed Capacity, or that is received by the Responsible Interface Party for the provision of Installed Capacity by the Special Case Resource. The Offer Floor calculation shall include any payment or the value of other benefits that are awarded for offering or supplying In-City Capacity, except for payments or the value of other benefits provided under programs administered or approved by New York State or a government instrumentality of New York State. Offers by a Responsible Interface Party at a PTID shall be not lower than the highest Offer Floor applicable to a Special Case Resource providing Installed Capacity at that PTID. Such offers may comprise a set of points for which prices may vary with the quantity offered. If this set includes megawatts from a Special Case Resource(s) with an Offer Floor, then at least the quantity of megawatts in the offer associated with each Special Case Resource must be offered at or above the Special Case Resource's Offer Floor. Offers by a Responsible Interface Party shall be subject to audit to determine

whether they conformed to the foregoing Offer Floor requirements. If a Responsible Interface Party together with its Affiliated Entities submits one or more offers below the applicable Offer Floor, and such offer or offers cause or contribute to a decrease in UCAP prices in the New York City Locality of 5 percent or more, provided such decrease is at least \$.50/kilowatt-month, the Responsible Interface Party shall be required to pay to the ISO an amount equal to 1.5 times the difference between the Market-Clearing Price for the New York City Locality in the ICAP Spot Auction for which the offers ~~exceeding~~below the Offer Floor were submitted with and without such offers being set to the Offer Floor, times the total amount of UCAP sold by the Responsible Interface Party and its Affiliated Entities in such ICAP Spot Auction. If an offer is submitted below the applicable Offer Floor, the ISO will notify the Responsible Market Party and the notification will identify the offer, the Special Case Resource, the price impact, and the penalty amount. The ISO will provide the notice reasonably in advance of imposing such penalty. The ISO shall distribute any amounts recovered in accordance with the foregoing provisions among the entities, other than the entity subject to the foregoing payment requirement, supplying Installed Capacity in regions affected by one or more offers below an applicable Offer Floor in accordance with ISO Procedures.

23.4.5.7.6 An In-City Installed Capacity Supplier that is not a Special Case Resource shall be exempt from an Offer Floor if it was an existing facility on or before March 7, 2008.

23.4.5.7.78 Mitigated UCAP that is subject to an Offer Floor shall remain -subject to the requirements of Section 23.4.5.4, and if the Offer Floor is higher than the applicable offer cap shall submit offers not lower than the applicable Offer Floor.

## **23.4.6 Virtual Bidding Measures**

### **23.4.6.1 Purpose**

The provisions of this Section 23.4.6 specify the market monitoring and mitigation measures applicable to “Virtual Bids.” “Virtual Bids” are bids to purchase or supply energy that are not backed by physical load or generation that are submitted in the ISO Day-Ahead Market in accordance with the procedures and requirements specified in the ISO Services Tariff.

To implement the mitigation measures set forth in this Section 23.4.6, the ISO shall monitor and assess the impact of Virtual Bidding on the ISO Administered Markets.

### **23.4.6.2 Implementation**

23.4.6.2.1 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.

23.4.6.2.2 The ISO 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 four week period or such other period determined by the ISO to be appropriate to achieve the purpose of this mitigation measure.

23.4.6.2.3 If the ISO 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, and that (ii) the Virtual Bidding practices of one or more Market Participants has contributed to an unwarranted divergence of LBMPs between the two markets, then the following mitigation measure may be imposed. Any such measure shall be rescinded upon a determination by the ISO that the foregoing conditions are not met.

#### **23.4.6.3 Description of the Measure**

23.4.6.3.1 If the ISO determines that the conditions specified in Section 23.4.6.2 exist, the ISO may limit the hourly quantities of Virtual Bids for supply or load that may be offered in a zone by a Market Participant whose Virtual Bidding practices have been determined to contribute to an unwarranted divergence of LBMPs between the Day-Ahead and Real-Time Markets. Any such limitation shall be set at such level that, and shall remain in place for such period as, in the best judgment of the ISO, would be sufficient to prevent any unwarranted divergence between Day-Ahead and Real-Time LBMPs.

23.4.6.3.2 As part of the foregoing determination, the ISO shall request explanations of the relevant Virtual Bidding practices from any Market Participant submitting such bids. Prior to imposing a Virtual Bidding quantity limitation as specified above, the ISO shall notify the affected Market Participant of the limitation.

#### **23.4.6.4 Limitation of Virtual Bidding**

If the ISO determines that such action is necessary to avoid substantial deviations of LBMPs between the Day-Ahead and Real-Time Markets, the ISO may impose limits on the quantities of Virtual Bids that may be offered by all Market Participants. Any such restriction shall limit the quantity of Virtual Bids for supply or load that may be offered by each Market

Participant by hour and by zone. Any such limit shall remain in place for the minimum period necessary to avoid substantial deviations of LBMPs between the Day-Ahead and Real-Time Markets, or to maintain the reliability of the New York Control Area.

#### **23.4.7 Increasing Bids in Real-Time for Day-Ahead Scheduled Incremental Energy**

##### **23.4.7.1 Purpose**

This Section 23.4.7 specifies the monitoring applicable and the mitigation measures that may be applicable to a Market Party with submitted Incremental Energy Bids in the real-time market that exceed the Incremental Energy Bids made in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriated, for a portion of the Capacity of one or more of its Generators that has been scheduled in the Day-Ahead Market.

The purpose of the Services Tariff rules authorizing the submission of Incremental Energy Bids in the real-time market that exceed the Incremental Energy Bids made in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriate, for the portion of the Capacity of a Market Party's Generator that was scheduled in the Day-Ahead Market is to permit the inclusion of additional costs of providing incremental Energy in real-time Incremental Energy Bids for Generators scheduled in the Day-Ahead Market, where the additional costs of providing incremental Energy were not known prior to the close of the Day-Ahead Market.

##### **23.4.7.2 Monitoring and Implementation**

The ISO will monitor Market Parties for unjustified interactions between a Market Party's virtual bidding and the submission of real-time Incremental Energy Bids that exceed the Incremental Energy Bids submitted in the Day-Ahead Market or mitigated Day-Ahead



Incremental Energy Bids where appropriate, for the portion of a Generator's Capacity that was scheduled in the Day-Ahead Market.

If the Market Party has a scheduled Virtual Load Bid for the same hour of the Dispatch Day as the hour for which submitted real-time Incremental Energy Bids exceeded the Incremental Energy Bids submitted in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriate, for a portion of its Generator's Capacity that was scheduled in the Day-Ahead Market, and any such real-time Incremental Energy Bids exceed the reference level for those Bids that can be justified after-the-fact by more than:

- (i) the lower of \$100/MWh or 300%
- (ii) If the Market Party's Generator is located in a Constrained Area for intervals in which an interface or facility into the area in which the Generator or generation is located has a Shadow Price greater than zero, then a threshold calculated in accordance with Sections 23.3.1.2.2.1 and 23.3.1.2.2.2 of these Mitigation Measures;

and a calculation of a virtual market penalty pursuant to the formula set forth in Section 23.4.3.3.4 of these Mitigation Measures for the Market Party would produce a positive number, then the ISO will ask the Market Party to demonstrate that the real-time Incremental Energy Bid(s) for that hour were submitted for reasons that are consistent with competitive behavior. If the Market Party is unable to show to the satisfaction of the ISO (with review and comment by the Market Monitoring Unit) that the submitted real-time Incremental Energy Bid(s) were consistent with competitive behavior then the mitigation measure specified below in Section 23.4.7.3.1 shall be imposed for the Market Party's Generator, along with a penalty calculated in accordance with Section 23.4.3.3.4 of these Mitigation Measures which may be imposed. The

application of a penalty under Section 23.4.3.3.4 of these Mitigation Measures shall not preclude the simultaneous application of a penalty pursuant to Section 23.4.3.3.3 of these Mitigation Measures. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.9 of the Plan.

### **23.4.7.3 Mitigation Measure**

23.4.7.3.1 If the ISO determines that the conditions specified in Section 23.4.7.2 exist, and the Market Party is unable to demonstrate that the real-time Incremental Energy Bid was consistent with competitive behavior, the ISO shall revoke the opportunity for any bidder of that Generator to submit Incremental Energy Bids in the real-time market that exceed the Incremental Energy Bids submitted in the Day-Ahead Market or mitigated Day-Ahead Incremental Energy Bids where appropriate, for portions of that Generator's Capacity that were scheduled Day-Ahead.

23.4.7.3.2 In addition to the restrictions imposed under Section 23.4.7.3.1, the ISO may impose penalties on the Market Party calculated in accordance with Section 23.4.3.3.4 of these Mitigation Measures.

### **23.4.8 Duration of Mitigation Measures**

Except as specified in Section 23.4.5 of this Attachment H, 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 ISO.