Attachment H – Marke	et Mitigation	Measures
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(Redline of version of Attachment H generated August 3, 2010. The black-font text includes material that the NYISO has recently filed with FERC.)

**Key:** 

Language stricken in black font = previously proposed deletions

**Language underlined in black font = previously proposed additions** 

Language in colored font = Current STR proposals for addition or deletion

### 23.1. Purpose and Objectives

- 23.1.1 These ISO market power mitigation measures ("Mitigation Measures") are intended to provide the means for the ISO to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the ISO Administered Markets, while avoiding unnecessary interference with competitive price signals. Consistent with the provisions of the ISO's Market Monitoring Plan that is set forth in Attachment O to the ISO Services Tariff, 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.
- 23.1.2 In addition, the ISO and its Market Monitoring Unit shall monitor the markets it the ISO administers for conduct that the ISO or the Market Monitoring Unit determines constitutes an abuse of market power but that does not trigger the thresholds specified below for the imposition of mitigation measures by the ISO. If the ISO identifies or is made aware of any such conduct, and in particular conduct exceeding the thresholds for presumptive market effects specified in Section 23.3.2.3 below, it shall make a filing under Section 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 ISO believes warrants mitigation, shall propose a specific mitigation measure for the conduct, shall incorporate or address the recommendation of its Market Monitoring Unit, and shall set forth the ISO's justification for imposing that mitigation measure. The Market Monitoring Unit's

reporting obligations are specified in Sections 30.4.5.3 and 30.4.5.4 of
Attachment O. The responsibilities of the Market Monitoring Unit that are
addressed in this section of the Mitigation Measures are also addressed in Section
30.4.6.2.1 of Attachment O.

## 23.2 Conduct Warranting Mitigation

#### 23.2.1 Definitions

The following definitions are applicable to this Attachment H:

For purposes of Section 23.4.5 of this Attachment H, "Affiliated Entity" shall mean, with respect to a person or Entity:

- i) all persons or Entities that directly or indirectly control such person or Entity;
- all persons or Entities that are directly or indirectly controlled by or under common control with such person or Entity, and (1) are authorized under ISO

  Procedures to participate in a market for Capacity administered by the ISO, or (2) possess, directly or indirectly, an ownership, voting or equivalent interest of ten percent or more in an In-City Installed Capacity Supplier;
- all persons or Entities that provide services to such person or Entity, or for which such person or Entity provides services, if such services relate to the determination or submission of offers for Unforced Capacity in a market administered by the ISO; or
- iv) all persons or Entities with which such person or Entity has any form of agreement under which such person or Entity has retained or has conferred rights of Control of Unforced Capacity.

In the foregoing definition, "control" means the possession, directly or indirectly, of the power to direct the management or policies of a person or Entity, and shall be rebuttably presumed from an ownership, voting or equivalent interest of ten percent or more.

For purposes of §Section 23.4.5 of this Attachment H, "Attributable ICAP" shall mean ICAP from an In-City Installed Capacity Supplier that an entity has rights to use in fulfillment of its Installed Capacity obligation, or to which the entity has rights of ownership or Control, or as to which it has any other form of significant financial obligation.

"Constrained Area" shall mean: (a) the In-City area, including any areas subject to transmission constraints within the In-City area that give rise to significant locational market

power; and (b) any other area in the New York Control Area that has been identified by the ISO as subject to transmission constraints that give rise to significant locational market power, and that has been approved by the Commission for designation as a Constrained Area.

For purposes of Section 23.4.5 of this Attachment H, "Control" with respect to Unforced Capacity shall mean-either (a) the ability to determine the quantity or price of offers to supply Unforced Capacity from an In-City Installed Capacity Supplier submitted into an ICAP Spot Market Auction, or (b) a right to revenue or other financial benefits from such Unforced Capacity.

"Developer" shall have the meaning specified in the ISO's Open Access Transmission Tariff.

"Electric Facility" shall mean a Generator or an electric transmission facility.

For purposes of Section 23.4.5 of this Attachment H, "Entity" shall mean a corporation, partnership, limited liability corporation or partnership, firm, joint venture, association, joint-stock company, trust, unincorporated organization or other form of legal or juridical organization or entity.

For purposes of Section 23.4.5 of this Attachment H, "Going-Forward Costs" shall mean: either (a) the costs, including but not limited to mandatory capital expenditures necessary to comply with federal or state environmental, safety or reliability requirements that must be met in order to supply Installed Capacity, net of anticipated energy and ancillary services revenues, as determined by the ISO as specified in Section 23.4.5.3, for each of the following instances, as applicable, of supplying Installed Capacity that could be avoided if an Installed Capacity Supplier otherwise capable of supplying Installed Capacity were either (1) to cease supplying Installed Capacity and Energy for a period of one year or more while retaining the ability to reenter such markets, or (2) to retire permanently from supplying Installed Capacity and Energy; or (b) the opportunity costs of foregone sales outside of the New York City Locality, net of costs that would have been incurred as a result of the foregone sale if it had taken place.

<u>"Initial Decision Period"</u> shall have the meaning specified in Attachment S of the ISO's Open Access Transmission Tariff.

"Interconnection Customer" shall have the meaning specified in Attachment Z of the ISO's Open Access Transmission Tariff.

"Interconnection Facilities Study Agreement" shall have the meaning specified in Attachment X of the ISO's Open Access Transmission Tariff.

"Market Monitoring Unit" shall have the same meaning in these Mitigation Measures as it has in Attachment O.

"Market Party" shall mean any person or entity that is a buyer or a seller in, or that makes bids or offers to buy or sell in, or that schedules or seeks to schedule Transactions with the ISO in or affecting any of the ISO Administered Markets, or any combination of the foregoing.

For purposes of Section 23.4.5 of this Attachment H, "Mitigated UCAP" shall mean one or more megawatts of Unforced Capacity that are subject to Control by a Market Party that has been identified by the ISO as a Pivotal Supplier.

"New Capacity" shall mean a new Generator, a substantial addition to the capacity of an existing Generator, or the reactivation of all or a portion of a Generator that has been out of service for five years or more that commences commercial service after the effective date of this definition.

For purposes of §Section 23.4.5 of this Attachment H, "Net Buyer" shall mean an entity that, together with its Affiliates, has a total LSE Unforced Capacity Obligation relating to In-City Load that is greater than the total amount of Attributable ICAP of the entity and its Affiliates.

For purposes of Section 23.4.5 of this Attachment H, "Net CONE" shall mean the localized levelized embedded costs of a peaking unit in the New York City Locality, net of the likely projected annual Energy and Ancillary Services revenues of such unit, as determined in connection with establishing the Demand Curve for the New York City Locality pursuant to Section 5.14.1.2 of the Services Tariff, or as escalated as specified in Section 23. 4.5.7 of Attachment H.

For purposes of Section 23.4.5 of this Attachment H, "Offer Floor" for an In-City Installed Capacity Supplier that is not a Special Case Resource shall mean the lesser of a numerical value equal to 75% of the Net CONE translated into a seasonally adjusted monthly UCAP value, or a numerical value determined as specified in Section 23.4.5.7.3, translated into a seasonally adjusted monthly UCAP value using an appropriate class outage rate, or for an In-City Installed Capacity Supplier that is a Special Case Resource shall mean a numerical value determined as specified in Section 23.4.5.7.5.

For purposes of Section 23.4.5 of this Attachment H, "**Pivotal Supplier**" shall mean a Market Party that, together with any of its Affiliateds Entities, (a) Controls 500 MW or more of Unforced Capacity, and (b) Controls Unforced Capacity some portion of which is necessary to meet the New York City Locational Minimum Installed Capacity Requirement in an ICAP Spot Market Auction.

<u>"Project Cost Allocation"</u> shall have the meaning specified in Attachment S of the ISO's Open Access Transmission Tariff.

For purposes of Section 23.4.5 of this Attachment H, "Responsible Market Party" shall mean the Market Party that is authorized, in accordance with ISO Procedures, to submit offers in an ICAP Spot Market Auction to sell Unforced Capacity from a specified Installed Capacity Supplier.

<u>"Revised Project Cost Allocation"</u> shall have the meaning specified in Attachment S of the ISO's Open Access Transmission Tariff.

<u>"Subsequent Decision Period"</u> shall have the meaning specified in Attachment S of the ISO's Open Access Transmission Tariff.

For purposes of Section 23.4.5 of this Attachment H, "Surplus Capacity" shall mean the amount of Installed Capacity, in MW, available in the New York City Locality in excess of the Locational Minimum Installed Capacity Requirement for the New York City Locality.

For purposes of Section 23.4.5 of this Attachment H, "UCAP Offer Reference Level" shall mean a dollar value equal to the projected clearing price for each ICAP Spot Market Auction determined by the ISO on the basis of the applicable ICAP Demand Curve and the total quantity of Unforced Capacity from all Installed Capacity Suppliers in the New York City Locality for the period covered by the applicable ICAP Spot Market Auction.

For purposes of Section 23.4.5 of this Attachment H, "Unit Net CONE" shall mean localized levelized embedded costs of a specified Installed Capacity Supplier, including interconnection costs, and for an Installed Capacity Supplier located outside the New York City Locality including embedded costs of transmission service, in either case net of likely projected annual Energy and Ancillary Services revenues, as determined by the ISO, translated into a seasonally adjusted monthly UCAP value using an appropriate class outage rate.

## 23.2.2 Conduct Subject to Mitigation

Mitigation Measures may be applied: (i) to the bidding, scheduling or operation of an "Electric Facility"; or (ii) as specified in Section 23.2.4.2.

## 23.2.3 Conditions for the Imposition of Mitigation Measures

- 23.2.3.1 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 ISO Administered Markets.

  Accordingly, the ISO shall seek to impose Mitigation Measures only to remedy conduct that:
- 23.2.3.1.1 is significantly inconsistent with competitive conduct; and

- 23.2.3.1.2 would result in a material change in one or more prices in an ISO Administered Market or production cost guarantee payments ("guarantee payments") to a Market Party.
- 23.2.3.2 In general, the ISO shall consider a Market Party's or its Affiliates' conduct to be inconsistent with competitive conduct if the conduct would not be in the economic interest of the Market Party or its Affiliates 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 23.2.4 below.

## 23.2.4 Categories of Conduct that May Warrant Mitigation

- 23.2.4.1 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 an ISO Administered Market if exercised from a position of market power. Accordingly, the ISO shall monitor the ISO Administered 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:
- 23.2.4.1.1 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 an ISO Administered 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 Bbids or schedules for an Electric Facility when such conduct would not be in the economic interest of the Market Party or its Affiliates in the absence of market power; (iii); making

reduces its ability to provide Energy or Ancillary Services or (iv) operating a Generator in real-time at a lower output level than the Generator would have been expected to produce had the Generator followed the ISO's dispatch instructions, in a manner that is not attributable to the Generator's verifiable physical operating capabilities and that would not be in the economic interest of the Market Party or its Affiliates in the absence of market power.

For purposes of this Section and Section 23.4.3.2, the term "unjustifiable change" shall mean a change in an Electric Facility's operating parameters that is: (a) not attributable to the Electric Facility's verifiable physical operating capabilities, and (b) is not a rational competitive response to economic factors other than market power.

an unjustifiable change to one or more operating parameters of a Generator that

- 23.2.4.1.2 Economic withholding of an Electric Facility, that is, submitting Bbids 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 Bbids will set a market clearing price.
- 23.2.4.1.3 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.
- 23.2.4.2 Mitigation Measures may also be imposed, subject to FERC's approval, to mitigate the market effects of a rule, standard, procedure or design feature of an ISO Administered Market that allows a Market Party or its Affiliate 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.

- 23.2.4.3 Taking advantage of opportunities to sell at a higher price or buy at a lower price in a market other than an ISO Administered Market shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.
- 23.2.4.4 The ISO and the Market Monitoring Unit shall monitor the ISO

  Administered 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 an ISO Administered Market. The ISO 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 ISO Administered
  Markets; and (ii) seek such other authorization to mitigate the effects of such
  conduct from the FERC as may be appropriate. The responsibilities of the Market
  Monitoring Unit that are addressed in this section of the Mitigation Measures are
  also addressed in Section 30.4.6.2.2 of Attachment O.

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# 23.3 Criteria for Imposing Mitigation Measures

## 23.3.1 Identification of Conduct Inconsistent with Competition

Conduct that may potentially warrant the imposition of a mitigation measure includes the categories described in Section 23.2.4 above, which shall be detected through the use of indices and screens developed, adopted and made available as specified in Attachment O. The thresholds listed in Sections 23.3.1.1 to 23.3.1.3 below shall be used to identify substantial departures from competitive conduct indicative of an absence of workable competition.

## 23.3.1.1 Thresholds for Identifying Physical Withholding

- 23.3.1.1.1 The following initial thresholds will be employed by the ISO to identify physical withholding of a Generator or generation by a Market Party and its Affiliates:
- 23.3.1.1.1.1 Except for conduct addressed in Section 23.3.1.1.1.2: Withholding that exceeds (i) 10 percent of a Generator's capability, or (ii) 100 MW of a Generator's capability, or (iii) 5 percent of the total capability of a Market Party and its Affiliates, or (iv) 200 MW of the total capability of a Market Party and its Affiliates.

For a Generator or a Market Party 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 \$0.04/MWhzero, indicating an active constraint, withholding that exceeds (i) 10 percent of a Generator's capability, or (ii) 50 MW of a Generator's capability, or (iii) 5 percent of the total capability of a Market Party and its Affiliates, or (iv) 100 MW of the total capability of a Market Party and its Affiliates

- 23.3.1.1.1.2 Operating a Generator or generation in real-time at a lower output level than would have been expected had the Market Party's and its Affiliate's Generator or generation followed the ISO's dispatch instructions, resulting in a difference in output that exceeds (i) 15 minutes times a Generator's stated response rate per minute at the output level that would have been expected had the Generator followed the ISO's dispatch instructions, or (ii) 100 MW for a Generator, or (iii) 200 MW of the total capability of a Market Party and its Affiliates. For a Generator or a Market Party in a Constrained Area for intervals in which an interface or facility into the area in which the generation is located has a Shadow Price greater than \$0.04/MWhzero, indicating an active constraint, operating a Generator or generation in real-time at a lower output level than would have been expected had the Market Party's and its Affiliate's Generator or generation followed the ISO's dispatch instructions, resulting in a difference in output that exceeds (i) 15 minutes times a Generator's stated response rate per minute at the output level that would have been expected had the Generator followed the ISO's dispatch instructions, or (ii) 50 MW of a Generator's capability, or (iii) 100 MW of the total capability of a Market Party and its Affiliates.
- 23.3.1.1.2 The amounts of generating capacity considered withheld for purposes of applying the thresholds in this Section 23.3.1.1 shall include unjustified deratings, and the portions of a Generator's output that is not Bbid 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 ISO maintenance schedule, subject to verification by the ISO as may be appropriate that an outage was forced.

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

# 23.3.1.2 Thresholds for Identifying Economic Withholding

- 23.3.1.2.1 The following thresholds shall be employed by the ISO to identify economic withholding that may warrant the mitigation of a Generator in an area that is not a Constrained Area, or in a Constrained Area during periods not subject to transmission constraints affecting the Constrained Area, and shall be determined with respect to a reference level determined as specified in Section 23.3.1.4:
- 23.3.1.2.1.1 <u>Incremental Energy</u> and Minimum Generation Bids: An increase exceeding 300 percent increase or an increase of \$100 per MWh, whichever is lower; provided, however, that <u>Incremental Energy</u> or Minimum Generation Bids below \$25 per MWh shall be deemed not to constitute economic withholding.
- 23.3.1.2.1.2 Operating Reserves and Regulation Service Bids: A 300 percent increase or an increase of \$50 per MW, whichever is lower; provided, however, that such <a href="Bbids">Bbids</a> below \$5 per MW shall be deemed not to constitute economic withholding.
- 23.3.1.2.1.3 Start-<u>Uup costs</u> Bids: A 200 percent increase.
- 23.3.1.2.1.4 Time-based <u>B</u>bid parameters: An increase of 3 hours, or an increase of 6 hours in total for multiple time-based <u>B</u>bid parameters. Time-based <u>B</u>bid parameters include, but are not limited to, start-up times, minimum run times and minimum down times.

- 23.3.1.2.1.5 Bid parameters expressed in units other than time or dollars, including the MW component of a Minimum Generation Bid (also referred to as the "minimum operating level"): A 100 percent increase for parameters that are minimum values, or a 50 percent decrease for parameters that are maximum values (including but not limited to ramp rates and maximum stops).
- 23.3.1.2.2 The following thresholds shall be employed by the ISO to identify economic withholding that may warrant the mitigation of a Generator in an area that is a Constrained Area, and shall be determined with respect to a reference level determined as specified in Section 23.3.1.4:
- 23 3 1 2 2 1 For Energy and Minimum Generation Bids for the Real-Time Market: for intervals in which an interface or facility into the area in which a Generator is located has a Shadow Price greater than \$0.04/MWhzero, indicating an active constraint, the lower of the thresholds specified for areas that are not Constrained Areas or a threshold determined in accordance with the following formula:

Threshold = 
$$\frac{2 \% * Average Price * 8760}{Constrained Hours}$$

where:

Average Price = the average price in the Real-Time Market in the Constrained Area

over the past 12 months, adjusted for fuel price changes, and adjusted for Out-of-Merit Generation dispatch as feasible and

appropriate; and

Constrained Hours = the total number of minutes over the prior 12 months, converted to hours (retaining fractions of hours), in which the real-time Shadow Price has been greater than zero \$0.04/MWh, indicating an active constraint, on any interface or facility leading into the Constrained Area in which the Generator is located. For the In-City area, "Constrained Hours" shall also include the number of minutes that a Storm Watch is in effect. Determination of the number of Constrained Hours shall be subject to adjustment by the ISO to account for significant changes in system conditions.

- 23.3.1.2.2.2 For so long as the In-City area is a Constrained Area, the thresholds specified in subsection 23.3.1.2.2.1 shall also apply: (a) in intervals in which the transmission capacity serving the In-City area is subject to Storm Watch limitations; (b) to an In-City Generator that is operating as Out-of-Merit Generation; and (c) to a Generator dispatched as a result of a Supplemental Resource Evaluation.
- 23.3.1.2.2.3 For Energy and Minimum Generation Bids for the Day-Ahead Market: for all Constrained Hours for the Generator being Bbid, a threshold determined in accordance with the formula specified in subsection 23.3.1.2.2.1 above, but where Average Price shall mean the average price in the Day-Ahead Market in the Constrained Area over the past twelve months, adjusted for fuel price changes, and where Constrained Hours shall mean the total number of hours over the prior 12 months in which the Shadow Price in the Day-Ahead Market has been greater than \$0.04/MWh zero, indicating an active constraint, on any interface or facility leading into the Constrained Area in which the Generator is located.

  Determination of the number of Constrained Hours shall be subject to adjustment by the ISO to account for significant changes in system conditions.
- by the ISO to account for significant changes in system conditions.
- 23.3.1.2.2.4 For Start-<u>Uup costs</u> Bids; a 50% increase.
- 23.3.1.2.2.5 The thresholds listed in Sections 23.3.1.2.1.2 and 23.3.1.2.1.4 through 23.3.1.2.1.5.

## 23.3.1.3 Thresholds for Identifying Uneconomic Production

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

- 23.3.1.3.1.1 Energy scheduled at an LBMP that is less than 20 percent of the applicable reference level and causes or contributes to transmission congestion; or
- 23.3.1.3.1.2 Real-time output from a Generator or generation resulting in real-time operation at a higher output level than would have been expected had the Market Party's and the Affiliate's Generator or generation followed the ISO's dispatch instructions, if such failure to follow ISO dispatch instructions in real-time causes or contributes to transmission congestion, and it results in an output difference that exceeds (i) 15 minutes times a Generator's stated response rate per minute at the output level that would have been expected had the Generator followed the ISO's dispatch instructions, or (ii) 100 MW for a Generator, or (iii) 200 MW of the total capability of a Market Party and its Affiliates.

### 23.3.1.4 Reference Levels

- 23.3.1.4.1 Except as provided in Sections 23.3.1.4.3 23.3.1.4.6 below, 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:
- 23.3.1.4.1.1 The lower of the mean or the median of a Generator's accepted Bids or Bid components, in hour beginning 6 to hour beginning 21 but excluding weekend and designated holiday hours, in competitive periods over the most recent previous 90 days period for which the necessary input data are available to the ISO's reference level calculation systems, adjusted for changes in fuel prices consistent with Section 23.3.1.4.7, below. To maintain appropriate reference levels (i) the ISO shall exclude all Incremental Energy and Minimum Generation Bids below \$15/MWh from its development of Bid-based reference levels, (ii) the

ISO shall exclude Minimum Generation Bids submitted for a Generator that was committed on the day prior to the Dispatch Day for the hours during the Dispatch Day that the Generator needs to operate in order to complete the minimum run time specified in the Bid it submitted for the hour in which it was committed, and (iii) the ISO may exclude other Bids that would cause a reference level to deviate substantially from a Generator's marginal cost when developing Bid-based reference levels:

23.3.1.4.1.2 Calculate incremental energy and minimum generation reference levels for a Generator using tThe mean of the LBMP at the Generator's location during the lowest-priced 25 50 percent of the hours that the Generator was dispatched over the most recent previous 90 days period for which the necessary LBMP data are available to the ISO's reference level calculation systems, adjusted for changes in fuel prices consistent with Section 23.3.1.4.7, below. To maintain appropriate reference levels (i) the ISO shall exclude all LBMPs below \$15/MWh from its development of LBMP-based reference levels, (ii) the ISO shall exclude LBMPs during hours when a Generator was scheduled as a Day-Ahead Reliability Unit or via a Supplemental Resource Evaluation or was Out-of-Merit Generation, from its development of that Generator's LBMP-based reference levels, (iii) for a Generator that was committed on the day prior to the Dispatch Day, the ISO shall exclude LBMPs for the hours during the Dispatch Day that the Generator needs to operate in order to complete the minimum run time specified in the Bid it submitted for the hour in which the Generator was committed from the ISO's development of that Generator's LBMP-based reference levels, and (iv) the ISO may exclude LBMPs that would cause a reference level to deviate substantially

- below a Generator's marginal cost when developing LBMP-based reference levels; or
- 23.3.1.4.1.3 A level determined in consultation with the Market Party submitting the Bid or Bids at issue, provided such consultation has occurred prior to the occurrence of the conduct being examined by the ISO, and provided the Market Party has provided data on a Generator's operating costs in accordance with specifications provided by the ISO. The reference level for a Generator's Energy Bid is intended to reflect the Generator's marginal costs. The ISO's determination of a Generator's marginal costs shall include an assessment of the Generator's incremental operating costs in accordance with the following formula, and such other factors or adjustments as the ISO shall reasonably determine to be appropriate based on such data as may be furnished by the Market Party or otherwise available to the ISO:
- ((heat rate \* fuel costs) + (emissions rate \* emissions allowance price) + other variable operating and maintenance costs)).
- 23.3.1.4.2 If sufficient data do not exist to calculate a reference level on the basis of either of the first two methods, or if the ISO determines that none of the three methods are applicable to a particular type of Bid component, or an attempt to determine a reference level in consultation with a Market Party has not been successful, or if the reference level produced does not reasonably approximate a Generator's marginal cost, the ISO shall determine a reference level on the basis of:
- 23.3.1.4.2.1 the ISO's estimate of the costs or physical parameters of an Electric Facility, taking into account available operating costs data, appropriate input from the Market Party, and the best information available to the ISO; or

- 23.3.1.4.2.2 an appropriate average of competitive Bbids of one or more similar Electric Facilities.
- 23.3.1.4.3 Notwithstanding the foregoing provisions, the reference level for Incremental Energy Bids for New Capacity for the three year and six month period following commencement of its commercial operation the New Capacity's first production of Energy while synchronously interconnected to the New York State Transmission System shall be the higher of (i) the amount determined in accordance with the provision of Section 23.3.1.4.1 or 23.3.1.4.2, or (ii) the average of the fuel price-adjusted peak LBMPs over the twelve months prior to the New Capacity's first production of Energy while synchronously interconnected to the New York State Transmission System commencement of operation of the New Capacity in the Load Zzone in which the New Capacity is located during hours when Generators with operating characteristics similar to the New Capacity would be expected to run. For entities owning or otherwise controlling the output of capacity in the New York Control Area other than New Capacity, the provisions of this Section 23.3.1.4.3 paragraph shall apply only to net additions of capacity during the applicable three year and six month period.
- 23.3.1.4.4 Notwithstanding the foregoing provisions, a reference level for a

  Generator's start-up costs Bid shall be calculated on the basis of the following methods, listed in the order of preference subject to the existence of sufficient data:
- 23.3.1.4.4.1 If sufficient bidding histories under the applicable bidding rules for a given Generator's start-up costs Bids have been accumulated, the lower of the mean or the median of the Generator's accepted start-up costs Bids in competitive periods over the previous 90 days for similar down times, adjusted for changes in

fuel prices consistent with Section 23.3.1.4.7 below. However, accepted Start-Up Bids that incorporate anticipated costs of operating on the day after the Dispatch Day in which the Generator is committed in order to permit the Generator to satisfy its minimum run time shall not be used to develop Bid-based start-up reference levels;

- 23.3.1.4.4.2 A level determined in consultation with the Market Party submitting the Bid or Bids at issue and intended to reflect the costs incurred for a Generator to achieve its specified minimum operating level from an offline state, provided such consultation has occurred prior to the occurrence of the conduct being examined by the ISO, and provided the Market Party has provided data on the Generator's operating costs in accordance with specifications provided by the ISO; or
- 23.3.1.4.4.3 Generators committed in the Day-Ahead Market or via Supplemental Resource Evaluation that are not able to complete their minimum run time within the Dispatch Day in which they are committed are eligible to include in their Start-Up Bid expected net costs of operating on the day following the dispatch day at the minimum operating level (in MW) specified in the Generator's Bid for the commitment hour, for the hours necessary to complete the Generator's minimum run time. The NYISO will calculate a start-up reference level that incorporates the net costs the Generator is expected to incur on the day following the Dispatch Day as follows:
- 23.3.1.4.4.3.1 Calculation of a start-up reference level that includes expected net costs of operating on the day following the Dispatch Day

The NYISO will use the following calculation to develop a reference level that incorporates the costs that a Generator is expected to incur on the day following the Dispatch Day.

$$LateDayAdjusted_{g,i} = StrtUpRef_g + \max \left(0, MinGenRef_{g,i} \cdot BidMinGen_{g,i} \cdot \sum_{h=0}^{Z_{g,i}-1} SR_{g,h,i}\right),$$

#### Where:

LateDayAdjusted<sub>g,i</sub> = calculated start-up reference level for Generator g for hour i in \$ (reflects the applicable start-up reference level (StrtUpRef<sub>g</sub>), plus the expected net cost of operating on the day following the Dispatch Day)

 $StrtUpRef_g = the start-up$  reference level for Generator g in \$ that is in effect at the time the calculation is performed (does not include the expected net cost of operating on the day following the Dispatch Day)

MinGenRef<sub>g,i</sub> = the minimum generation cost reference level for Generator g for hour i in \$/MW that is in effect at the time the calculation is performed

BidMinGen<sub>g,i</sub> = Generator g's Day-Ahead minimum operating level for hour i, in MW

 $Z_{g,i}$  = the number of hours the Generator must operate during the day following the Dispatch Day in order to complete its minimum run time if it starts in hour i

 $SR_{g,h,i}$  = shortfall ratio for Generator g that is bidding to start in hour i which must run during hour h in order to complete its minimum run time, calculated in accordance with Section 23.3.3.4.4.3.2, below

23.3.1.4.4.3.2 Calculation of the shortfall ratio for use in Section 23.3.1.4.4.3.1, above

 $SR_{g,h,i}$  = the shortfall ratio calculated for Generator g that is bidding to start in hour i, and that must run during hour h to complete its minimum run time.

In all cases in which Generator g's Day-Ahead minimum operating level deviates from the average of the previous seven days' Day-Ahead minimum operating levels for the same hour by less than 5 MW (*i.e.*, if |AvgBidMinGen<sub>g,h,i</sub> - BidMinGen<sub>g,i</sub>| < 5 MW) or by less than 10% (*i.e.*, if both BidMinGen<sub>g,i</sub> <  $1.1 \times \text{AvgBidMinGen}_{g,h,i}$  and BidMinGen<sub>g,i</sub> >  $0.9 \times \text{AvgBidMinGen}_{g,h,i}$ ),

Where:

 $AvgBidMinGen_{g,h,i}$  = The average minimum operating level submitted in the Day-Ahead Market for hour h on the seven days preceding the day containing hour i, in MW, excluding any days for which a minimum operating level was not submitted in the Day-Ahead Market for Generator g, for hour h; and

BidMinGen<sub>g,i</sub> = The minimum operating level submitted in the Day-Ahead Market for Generator g for hour i, in MW

and in all cases in which  $AvgBidMinGen_{g,h,i}$  cannot be calculated because minimum operating levels were not submitted for Generator g in the Day-Ahead Market for hour h on any of the seven days preceding the day containing hour i, the  $SR_{g,h,i}$  value will be calculated using the primary method. Otherwise, the  $SR_{g,h,i}$  value will be calculated using the alternative method.

Primary Method of Calculating the Shortfall Ratio

$$SR_{g,h,i} = 1 - \frac{1}{7} \cdot \sum_{d=1}^{7} \frac{LBMP_{g,h,i,d}}{MinGenRef_{g,h,i,d}},$$

Where:

 $LBMP_{g,h,i,d}$  = Day ahead LBMP at the location of Generator g in hour h of the Day-Ahead Market for the Dispatch Day that precedes the day containing hour i by d days, and

 $MinGenRef_{g,h,i,d} = minimum$  generation cost reference level for Generator g in hour h of the Day-Ahead Market for the Dispatch Day that precedes the day containing hour i by d days

## Alternative Method of Calculating the Shortfall Ratio

$$SR_{g,h,i} = 1 - \frac{AvgLBMP_{g,h,i}}{\left(AvgRefRate_{g,h,i} \cdot \frac{RefRate2_{g,i}}{RefRate1_{g,h,i}}\right)}$$

Where:

 $AvgLBMP_{g,h,i}$  = The average of the Day-Ahead LBMPs at the location of Generator g for hour h on the seven days preceding the day containing hour i, in \$/MWh, excluding any days for which a minimum operating level was not submitted in the Day-Ahead Market for Generator g for hour h

AvgRefRate<sub>g,h,i</sub> = The average of the minimum generation reference levels for Generator g in hour h on the seven days preceding the day containing hour i, in MWh, excluding any days for which a minimum operating level was not submitted in the Day-Ahead Market for Generator g for hour h

RefRate1<sub>g,h,i</sub> = The minimum generation cost reference level in \$/MWh for Generator g for hour i, calculated using the most current reference data, and assuming that the minimum operating level submitted in the Day-Ahead Market for Generator g in hour i corresponds to the MWs reflected in the AvgBidMinGen<sub>g,h,i</sub>

RefRate $2_{g,i}$  = The minimum generation cost reference level in \$/MWh for Generator g for hour i, calculated using the most current reference data, and incorporating the minimum operating level submitted in the Day-Ahead Market for Generator g in hour i that corresponds to the MWs reflected in the BidMinGen<sub>g,i</sub>

Notwithstanding the above, in all cases where the denominator of the equation for calculating  $SR_{g,h,i}$  is not greater than zero,  $SR_{g,h,i}$  shall be set to zero, under both the primary and alternative methods.

- 23.3.1.4.4.4 The methods specified in Section 23.3.1.4.2.
- 23.3.1.4.5 Notwithstanding the foregoing provisions, the reference level for 10-Minute Non-Synchronized reserves shall be the lower of (i) the amount determined in accordance with the provisions of Section 23.3.1.4.1.1, or (ii) \$2.52.
- 23.3.1.4.6 The ISO is not required to calculate real-time reference levels for the three Operating Reserve products (Spinning Reserve, 10-Minute Non-Synchronized Reserves and 30-Minute Reserves) because Generators that are capable of providing these products and that are submitting Bids into the Real-Time Market are automatically assigned a real-time Operating Reserves Availability Bid of zero for the amount of Operating Reserves they are capable of providing. The ISO shall calculate Day-Ahead reference levels for the three Operating Reserves products in accordance with Sections 23.3.1.4.1.1, 23.3.1.4.1.3 or 23.3.1.4.2 of these Mitigation Measures.
- 23.3.1.4.7 The ISO shall use the best information available to it to adjust reference levels to reflect appropriate fuel costs.

- 23.3.1.4.7.1 Market Parties shall monitor Generator reference levels and shall endeavor to timely (as that term is defined in Section 23.3.1.4.7.7 below) contact the ISO to request an adjustment to a Generator's reference level(s) when the Generator's fuel type or fuel price change.
- 23.3.1.4.7.2 Screening of fuel type and fuel price information. The ISO may use automated processes and/or require manual review of fuel type and fuel price information submitted by Market Parties to test the accuracy of the information submitted in order to prevent market clearing prices and guarantee payments from being incorrectly calculated.
- 23.3.1.4.7.3 Consistent with the rules specified in this Section 23.3.1.4.7 of the

  Mitigation Measures and the procedures that the ISO develops to implement these
  rules, Market Parties shall notify the ISO of changes in fuel type or fuel price by
  (i) submitting revised fuel type or fuel price information to the ISO's Market
  Information System along with the Generator's Bid(s), or (ii) by directly
  contacting the ISO to request a reference level update consistent with ISO
  procedures, or (iii) by utilizing both of the available notification methods.

  Revised fuel type or fuel price information that exceeds, or is rejected based upon,
  the thresholds that the ISO uses to automatically screen fuel type or fuel price
  information that is submitted to the ISO's Market Information System along with
  a Generator's Bid(s) shall be submitted by directly contacting the ISO to request a
  reference level update, consistent with ISO procedures.
- 23.3.1.4.7.4 Following the completion of the ISO's automated and/or manual screening processes, the ISO shall use fuel type and fuel price information that Market Parties or their representatives submit to develop Generator reference levels unless (i) the information submitted is inaccurate, or (ii) the information was not

timely submitted, and the Market Party's failure to timely submit the information is not excused by the ISO in accordance with Section 23.3.1.4.7.7 below, or (iii) consistent with Section 23.3.1.4.7.8 below.

23 3 1 4 7 5 The ISO may not always have sufficient time to complete its screening of proposed fuel type or fuel price changes prior to the relevant Day-Ahead Market day or Real-Time Market hour. If fuel type or fuel price information (i) is timely submitted or, where untimely, the submission of fuel type or fuel price information is excused in accordance with Section 23.3.1.4.7.7 below, and (ii) the fuel type or fuel price information that the Market Party submitted is proven to have been accurate or to have understated the actual cost incurred for that component, and (iii) the Bid(s) were tested using reference levels that reflected outdated fuel type and/or fuel price information and the Bid(s) were mitigated or a sanction was imposed pursuant to Section 23.4.3 of these Mitigation Measures, then the ISO shall (a) re-perform any test(s) that resulted in a sanction being imposed pursuant to Section 23.4.3 of these Mitigation Measures, using the accurate fuel type and/or fuel price information and use the revised results to calculate the appropriate sanction (if any), and (b) determine if the Bids for the Generator would have failed the relevant conduct test(s) if accurate fuel type and/or fuel price information had been used to develop reference levels. The ISO shall then restore any original (as-submitted) Bid(s) that would not have failed the relevant conduct test(s) if accurate fuel type and/or fuel price information had been used to develop the Generator's reference levels, and use the restored Bid(s) to determine a settlement. Otherwise the ISO shall use the Generator's correct or corrected reference level(s) to determine a settlement.

- 23.3.1.4.7.6 The ISO shall publicly post the thresholds it employs to automatically screen fuel type and fuel price information that is submitted to the ISO's Market Information System for potentially inaccurate fuel type and fuel price data inputs.
- 23.3.1.4.7.7 For purposes of this Section 23.3.1.4.7, "timely" notice or submission to the Real-Time Market shall mean the submission of fuel type and/or fuel price information using the methods specified in Section 23.3.1.4.7.3 of these Mitigation Measures prior to market close for the relevant Real-Time Market hour. For purposes of this Section 23.3.1.4.7, "timely" notice or submission to the Day-Ahead Market shall mean the submission of fuel type and/or fuel price information using the methods specified in Section 23.3.1.4.7.3 of these Mitigation Measures prior to the close of the Day-Ahead Market. Market Parties are not expected to submit invoices or other supporting data with their Day-Ahead Market or Real-Time Market fuel type and fuel price information, but are expected to retain invoices and other supporting data consistent with the data retention requirements set forth in the Plan, and to be able to produce such information within a reasonable timeframe when asked to do so by the ISO or by its Market Monitoring Unit.

It may not always be possible for a Market Party to timely update a Generator's fuel type or fuel price to reflect unexpected real-time changes or events in advance of the first affected market-hour. Upon a showing of extraordinary circumstances, the ISO may retroactively reflect in Real-Time Market reference levels fuel type or fuel price information that was not timely submitted by a Market Party. While it should ordinarily be possible for a Market Party to timely submit updated fuel type and fuel price information for use in developing a Generator's Day-Ahead Market reference levels, the ISO may retroactively accept

- and utilize late-submitted Day-Ahead Market fuel type or fuel price information upon a showing of extraordinary circumstances.
- If (i) the ISO determines, following consultation with the Market Party and 23.3.1.4.7.8 review by the Market Monitoring Unit, that the Market Party or its representative has, over a time period of at least one week, submitted inaccurate fuel type or fuel price information that was, taken as a whole, biased in the Market Party's favor, or (ii) if a Market Party is subject to a penalty or sanction under Section 23.4.3.3.3 of these Mitigation Measures for submitting inaccurate fuel price or fuel type information, then the ISO may cease using the fuel type and fuel price information submitted to the ISO's Market Information System along with the Generator's Bid(s) to develop reference levels for the affected Generator(s) for a period of up to six months following the first identified occurrence, and for a period of up to one year following each subsequent occurrence. The six month or one year period shall be calculated from the date of the most recent instance in which inaccurate fuel type or fuel price information was submitted to the ISO. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.3 of the Plan.
- 23.3.1.4.7.9 In order to adjust (i) Bid-based incremental energy, minimum generation and start-up reference levels, and (ii) LBMP-based incremental energy and minimum generation reference levels to more accurately reflect fuel costs, the ISO may calculate distinct Bid- and LBMP-based reference levels for each fuel type or blend of fuel types that a Generator is capable of burning, and shall fuel index each of the distinct Bid- or LBMP-based reference levels that it calculates for fuel types that are amenable to fuel indexing. Where a Generator can draw on

multiple natural gas sources that each have distinct, posted, market clearing prices, the ISO may calculate distinct Bid-Based or LBMP-based reference levels for each such available supply source.

23.3.1.4.8 Except as otherwise authorized in accordance with Section 23.3.1.4.7.7 above, Market Parties shall timely report significant changes to the cost components used to develop their Generator's reference levels to the ISO in order to permit the revised costs to be timely reflected in the Generator reference levels. However, if the ISO uses published index prices to fuel index a Generator's reference level when that Generator is burning a fuel type that is amenable to fuel indexing (which may include a blend of two indexed fuel types), the Market Party is not required to report fuel prices that are less than the published index price that the ISO relies on.

# 23.3.2 Material Price Effects or Changes in Guarantee Payments

### 23.3.2.1 Market Impact Thresholds

In order to avoid unnecessary intervention in the ISO Administered 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 an ISO Administered Market, or (ii) substantially increases guarantee payments to participants in the New York Electric Market. Initially, the thresholds to be used by the ISO to determine a material price effect or change in guarantee payments shall be:

23.3.2.1.1 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 an ISO Administered Market; or

- 23.3.2.1.2 an increase of 200 percent, or 50 percent for Generators in a Constrained

  Area in <u>Bid Production Cost</u> guarantee payments to a Market Party <u>for a</u>

  <u>Generator</u> for a day; or
- 23.3.2.1.3 for a Constrained Area Generator subject to either a Real-Time Market or Day-Ahead Market conduct threshold, as specified above in Sections 23.3.1.1.1, 23.3.1.2.2.1, or 23.3.1.2.2.3: for all Constrained Hours (as defined in Section 23.3.1.2.2.1 for the Real-Time Market and in Section 23.3.1.2.2.3 for the Day-Ahead Market) for the unit being Bbid, a threshold determined in accordance with the formula specified in Section 23.3.1.2.2.1 for the Real-Time Market or Section 23.3.1.2.2.3 for the Day-Ahead Market.

### 23.3.2.2 Price Impact Analysis

- 23.3.2.2.1 When it has the capability to do so, the ISO shall determine the effect on prices or guarantee payments of questioned conduct through the use of sensitivity analyses performed using the ISO's SCUC, RTC and RTD computer models, and such other computer modeling or analytic methods as the ISO shall deem appropriate following consultation with its Market Monitoring Unit. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.4 of Attachment O.
- 23.3.2.2.2 Pending development of the capability to use automated market models, the ISO, following consultation with its Market Monitoring Unit, 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. The responsibilities of the Market Monitoring Unit that are addressed in this section of

the Mitigation Measures are also addressed in Section 30.4.6.2.5 of Attachment O.

- 23.3.2.2.3 The ISO shall implement automated procedures within the SCUC for Constrained Areas, and within RTC for Constrained Areas. Such automated procedures will: (i) determine whether any Day-Ahead or Real-Time Energy Bids, including start-up costs Bids and Minimum Generation Bids but excluding Ancillary Services Bids, that have not been adequately justified to the ISO exceed the thresholds for economic withholding specified in Section 23.3.1.2 above; and, if so, (ii) determine whether such Bbids would cause material price effects or changes in guarantee payments as specified in Section 23.3.2.1.
- 23.3.2.2.4 The ISO shall forgo performance of the additional SCUC and RTC passes necessary for automated mitigation of Bbids in a given Day-Ahead Market or Real-Time Market if evaluation of unmitigated Bbids results in prices at levels at which it is unlikely that the thresholds for Bbid mitigation will be triggered.

#### **23.3.2.3** Section **205** Filings

The ISO 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 23.3.1.1 through 23.3.1.3 above if that conduct has a significant effect on market prices or guarantee payments as specified below, unless the ISO determines, from information provided by the Market Party or Parties, (which may includeing a Demand Side Resource participating in the Operating Reserves or Regulation Service Markets), that would be subject to mitigation, or from other information available to the ISO that the conduct and associated price or guarantee payment effect(s) 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:

- 23.3.2.3.1 an increase of 100 percent in the hourly day-ahead or real-time energy LBMP at any location, or of any other price in an ISO Administered Market; or
- 23.3.2.3.2 an increase of 100 percent in <u>Bid Production Cost</u> guarantee payments to a Market Party <u>for a Generator</u> for a day, <u>or an increase of 100 percent in any other guarantee payment over the time period used by the ISO to calculate the guarantee payment</u>.

## 23.3.3 Consultation with a Market Party

#### 23.3.3.1 Consultation Process

Consultation initiated by the ISO to determine if mitigation is appropriate: Applies to

Market-Party-specific and/or Generator-specific mitigation, but not to mitigation that is applied

pursuant to Sections 23.3.1.2.3, 23.3.2.2.3, or 23.5.2 of these mitigation measures. 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 an ISO Administered Market, the ISO

shall, as and to the extent specified in Attachment O or in Section 23.3.3.2 of these Mitigation

Measures, contact the Market Party engaging in the identified conduct to request an explanation

of the conduct.

<u>Consultation initiated by a Market Party when it anticipates that its Generator's marginal costs or other Bid parameters may exceed its Generator's reference level(s) by more than the relevant threshold(s).</u> If a Market Party anticipates submitting <u>B</u>bids in a market

administered by the ISO that will exceed the thresholds specified in Section 23.3.1 above for identifying conduct inconsistent with competition, the Market Party may contact the ISO to provide an explanation of any legitimate basis for any such changes in the Market Party's Bbids. Results of consultation process addressing Bids. If a Market Party's explanation of the reasons for its bidding indicates to the satisfaction of the ISO that the questioned conduct is consistent with competitive behavior, no further action will be taken. Market Parties shall ensure that the information they submit to the ISO, including but not limited to fuel price and fuel type information, is accurate. Except as set forth in Section 23.3.1.4.7.7, the ISO may not retroactively revise a reference level to reflect additional fuel costs if a Market Party or its representative did not timely submit accurate fuel cost information. Unsupported speculation by a Market Party does not present a valid basis for the ISO to determine that Bids that a Market Party submitted are consistent with competitive behavior, or to determine that submitted costs are appropriate for inclusion in the ISO's development of reference levels. Consistent with Sections 30.6.2.2 and 30.6.3.2 of the Plan, the Market Party shall retain the documents and information supporting its Bids and the costs it proposes to include in reference levels. A preliminary determination by the ISO shall be provided to the Market Monitoring Unit for its review and comment.

Consultation initiated by a Market Party regarding reference levels. Upon request, the ISO shall also consult with a Market Party or its representative with respect to the information and analysis used to determine reference levels under Section 23.3.1.4 for that Market Party's Generator(s). If cost data or other information submitted by a Market Party indicates to the satisfaction of the ISO that the reference levels for that Market Party's Generator(s) should be changed, revised reference levels shall be determined proposed by the ISO, communicated to the Market Monitoring Unit for its review and comment reviewed by the Market Monitoring Unit

and, following the ISO's consideration of the any recommendations that the Market Monitoring Unit's recommendation is able to timely provide, communicated to the Market Party, and implemented by the ISO as soon as practicable. Changes to reference levels shall be implemented on a going-forward basis. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.6 of Attachment O.

Information required to support consultation regarding Bids and reference levels.

Market Parties shall ensure that the information they submit to the ISO, including but not limited to fuel price and fuel type information, is accurate. Except as set forth in Section 23.3.1.4.7.7, the ISO may not retroactively revise a reference level to reflect additional fuel costs if a Market Party or its representative did not timely submit accurate fuel cost information. Unsupported speculation by a Market Party does not present a valid basis for the ISO to determine that Bids that a Market Party submitted are consistent with competitive behavior, or to determine that submitted costs are appropriate for inclusion in the ISO's development of reference levels.

Consistent with Sections 30.6.2.2 and 30.6.3.2 of the Plan, the Market Party shall retain the documents and information supporting its Bids and the costs it proposes to include in reference levels.

### 23.3.3.2 Consultation Requirements

23.3.3.2.1 The ISO shall make a reasonable attempt to contact and consult with the relevant Market Party about the Market Party's reference level(s) before imposing conduct and impact mitigation, other than conduct and impact mitigation imposed through the automated procedures described in Section 23.3.2.2.3 of these

- Mitigation Measures. The ISO shall keep records documenting its efforts to contact and consult with the Market Party.
- 23.3.3.2.2 Consultation regarding real-time guarantee payment mitigation is addressed in Section 23.3.3.3, below. Consultation regarding Day-Ahead guarantee payment mitigation of Generators, other than mitigation imposed through the automated procedures described in Section 23.3.2.2.3 of these Mitigation Measures, shall be conducted in accordance with Sections 23.3.3.1 and 23.3.3.2 of these Mitigation Measures.

## 23.3.3.3 Consultation Rules for Real-Time Guarantee Payment Mitigation

## 23.3.3.1 Real-Time Guarantee Payment Consultation Process

- 23.3.3.3.1.1 The ISO shall electronically post settlement results informing Market Parties of Bbid(s) that failed the real-time guarantee payment impact test. The settlement results posting shall include the adjustment to the guarantee payment and the mitigated Bbid(s). The initial posting of settlement results ordinarily occurs two days after the relevant real-time market day.
- 23.3.3.3.1.2 No more than two business days after new or revised real-time guarantee payment impact test settlement results are posted, the ISO will send an e-mail or other notification to all potentially impacted Market Parties that comply with Section 23.3.3.3.1.2.2 of these Mitigation Measures.
- 23.3.3.3.1.2.1 Although the ISO is authorized to take up to two business days to provide notification to all potentially impacted Market Parties that comply with Section 23.3.3.3.1.2.2 of these Mitigation Measures, the ISO shall undertake reasonable efforts to provide notification to such Market Parties within one

business day after new or revised real-time guarantee payment impact test settlement results are posted.

- 23.3.3.3.1.2.2 A Market Party that desires to receive notification from the ISO must provide one e-mail address to the ISO for real-time guarantee payment mitigation notices. Each Market Party is responsible for maintaining and monitoring the e-mail address it provides, and informing the ISO of any change(s) to that e-mail address in order to continue to receive e-mail notification. E-mail will be the ISOs primary method of providing notice to Market Parties.
- 23.3.3.3.1.2.3 Regardless of whether a Market Party chooses to receive notification from the ISO, each Market Party is responsible for reviewing its posted real-time guarantee payment impact test settlement results and for contacting the ISO to request a consultation if and when appropriate.
- 23.3.3.3.1.3 Market Parties that want to consult with the ISO regarding real-time guarantee payment impact test results for a particular market day must submit a written request to initiate the consultation process that specifies the market day and Bbid(s) for which consultation is being requested (for purposes of this Section 23.3.3.3.1, a "Consultation Request").
- 23.3.3.1.3.1 Consultation Requests must be received by the ISO's customer relations department within 15 business days after the ISO posts new or revised real-time guarantee payment impact test settlement results for the relevant market day. Consultation Requests received outside the 15 business day period shall be rejected by the ISO.
- 23.3.3.3.1.3.2 The ISO may send more than one notice informing a Market Party of the same instance of real-time guarantee payment mitigation. Notices that identify real-time guarantee payment impact test settlement results that are not

new (for which the Market Party has already received a notice from the ISO) and that do not reflect revised mitigation (for which the dollar impact of the real-time guarantee payment mitigation has not changed) shall not present an additional opportunity, or temporally extend the opportunity, for the Market Party to initiate consultation.

- 23.3.3.3.1.3.3 If consultation was timely requested and completed addressing a particular set of real-time guarantee payment impact test results, a Market Party may not again request consultation regarding the same real-time guarantee payment impact test results unless revised real-time guarantee payment impact test settlement results, that are not due to the previously completed consultation and that change the dollar impact of real-time guarantee payment mitigation, are posted.
- 23.3.3.3.1.4 The Consultation Request may include: (i) an explanation of the reason(s) why the Market Party believes some or all of the reference levels used by the ISO to determine the real-time guarantee payment impact test results for the market day(s) in question are inappropriate, or why some or all of the Market Party's Bbids on the market day(s) in question were otherwise consistent with competitive behavior; and (ii) supporting documents, data and other relevant information (collectively, for purposes of this Section 23.3.3.3.1, "Data"), including proof of any cost(s) claimed.
- 23.3.3.1.4.1 Market Parties shall ensure that the information they submit to the ISO, including but not limited to fuel price and fuel type information, is accurate.
  Except as set forth in Section 23.3.1.4.7.7, the ISO may not retroactively revise a reference level to reflect additional fuel costs if a Market Party or its representative did not timely submit accurate fuel cost information.

- 23.3.3.3.1.5 If the Market Party is not able to provide (i) an explanation of the reason(s) why the Market Party believes some or all of the reference levels used by the ISO to determine the real-time guarantee payment impact test results for the market day(s) in question are inappropriate, or why some or all of the Market Party's Bbids on the market day(s) in question were otherwise consistent with competitive behavior, or (ii) all supporting Data, at the time a Consultation Request is submitted, the Market Party should specifically identify any additional explanation or Data it intends to submit in support of its Consultation Request and provide an estimate of the date by which it will provide the additional explanation or Data to the ISO.
- 23.3.3.3.1.6 Following the submission of a Consultation Request that satisfies the timing and Bbid identification requirements of Section 23.3.3.3.1.3, above, consultation shall be performed in accordance with Section 23.3.3.1 of these Mitigation Measures, as supplemented by the following rules:
- 23.3.3.3.1.6.1 The ISO shall consult with the Market Party to determine whether the information available to the ISO presents an appropriate basis for

  (i) modifying the reference levels used to perform real-time guarantee payment mitigation for the market day in question, or (ii) determining that the Market Party's Bbid(s) on the market day in question were consistent with competitive behavior. The ISO shall only modify the reference levels used to perform real-time guarantee payment mitigation, or determine that the Market Party's Bbid(s) on the market day that is the subject of the Consultation Request were consistent with competitive behavior, if the ISO has in its possession Data that is sufficient to support such a decision.

- A preliminary determination by the ISO shall be provided to the Market Monitoring Unit for its review and comment, and the ISO shall consider the Market Monitoring Unit's recommendations in reaching its decision. The ISO shall inform the Market Party of its decision, in writing, as soon as reasonably practicable, but in no event later than 50 business days after the new or revised real-time guarantee payment impact test settlement results for the relevant market day were posted. If the ISO does not affirmatively determine that it is appropriate to modify the Bbid(s) that are the subject of the Consultation Request within 50 business days after the new or revised real-time guarantee payment impact test settlement results for the relevant market day were posted, the Bbid(s) shall remain mitigated. The responsibilities of the Market Monitoring Unit that are addressed in this section of the Mitigation Measures are also addressed in Section 30.4.6.2.7 of Attachment O.
- 23.3.3.1.6.3 The ISO may, as soon as practicable, but at any time within the consultation period, request Data from the Market Party. The Market Party is expected to undertake all reasonable efforts to provide the requested Data as promptly as possible, to inform the ISO of the date by which it expects to provide requested Data, and to promptly inform the ISO if the Market Party does not intend to, or cannot, provide Data that has been requested by the ISO.
- 23.3.3.3.1.7 This Section 23.3.3.3.1 addresses Consultation Requests. It is not intended to limit, alter or modify a Market Party's ability to submit or proceed with a billing dispute pursuant to Section 7.4 of the ISO Services Tariff or Section 2.7.4.1 of the ISO OATT.

- 23.3.3.2 Revising Reference Levels of Certain Generators Committed Out-of-Merit or via Supplemental Resource Evaluation for Conducting Real-Time Guarantee Payment Conduct and Impact Test
- 23.3.3.3.2.1 Consistent with and subject to all of the requirements of Section 23.3.3.3.1 of these Mitigation Measures, Generators that (i) are committed Out-of-Merit or via a Supplemental Resource Evaluation after the DAM has posted, and (ii) for which the NYISO has posted real-time guarantee payment impact test settlement results, may contact the ISO within 15 business days after new or revised impact test settlement results are posted to request that the reference levels used to perform the conduct and impact tests for real-time guarantee payment mitigation be adjusted to include any of the following verifiable costs:
- 23.3.3.2.1.1 procuring fuel at prices that exceed the index prices used to calculate the Generator's reference level;
- 23.3.3.2.1.2 burning a type of fuel or blend of fuels that is not reflected in the Generator's reference level;
- 23.3.3.2.1.3 gas balancing penalties;
- 23.3.3.2.1.4 compliance with operational flow orders; and
- 23.3.3.2.1.5 purchasing additional emissions allowances that are necessary to satisfy the Generator's Supplemental Resource Evaluation or Out-of-Merit schedule.
- 23.3.3.2.2 The five categories of verifiable costs specified above shall be used to modify the requesting Generator's reference level(s) subject to the following prerequisites:
- 23.3.3.2.2.1 the Generator must specifically and accurately identify and document the extraordinary costs it has incurred to operate during the hours of its Supplemental Resource Evaluation or Out-of-Merit commitment; and

23.3.3.2.2.2 the costs must not already be reflected in the Generator's reference levels or be recovered from the ISO through other means.

As soon as practicable after the Market Party demonstrates to the ISO's reasonable satisfaction that one or more of the five categories of extraordinary costs have been incurred, but in no event later than the deadline set forth in Section 23.3.3.3.1.6.2 of these Mitigation Measures, the ISO shall adjust the affected Generator's reference levels and re-perform the real-time guarantee payment conduct and impact tests for the affected day. Only the reference levels used to perform real-time guarantee payment mitigation will be adjusted.

- 23.3.3.2.3 If, at some point prior to the issuance of a Close-Out Settlement for the relevant service month, the ISO or the Commission determine that some or all of the costs claimed by the Market Party during the consultation process described above were not, in fact, incurred over the course of the Out-of-Merit or Supplemental Resource Evaluation commitment, or were recovered from the ISO through other means, the ISO shall re-perform the conduct and impact tests using reference levels that reflect the verifiable costs that the Generator incurred and shall apply real-time guarantee payment mitigation if the Generator's Beids fail conduct and impact at the corrected reference levels.
- 23.3.3.3.2.4 Generators may contact the ISO to request the inclusion of costs other than the five types identified above in their reference levels. The ISO shall consider such requests in accordance with Sections 23.3.1.4, or 23.3.3.3.1 of these Mitigation Measures, as appropriate.

#### 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 Bbid 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 Bbid 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 <u>or bid parameter</u> for a <u>Bbid or Bid parameter</u> submitted for an Electric Facility. The default bid or bid parameter shall establish a maximum or minimum

value for one or more components of the submitted <u>B</u>bid <u>or Bid parameters</u>, 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 <u>using the automated mitigation</u>

  procedures described in Section 23.3.2.2.3 of these Mitigation Measures to a

  default bid for an Incremental Energy Bid other than a default bid determined as

  specified in Section 23.3.1.4 <u>hereof</u>, 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 <u>B</u>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.

If an Electric Facility is mitigated to a default bid for a Start-Up Bid or a

Minimum Generation Bid other than a default bid determined as specified in

Section 23.3.1.4 of these Mitigation Measures, or 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 of these Mitigation Measures based on

mitigation procedures other than the automated mitigation procedures described

in Section 23.3.2.2.3 of these Mitigation Measures, then the ISO shall determine if the Bids would have failed the relevant conduct test(s) if correctly determined default bids had been used. The ISO shall then restore any original (as-submitted) Bid(s) that would not have failed the relevant conduct test(s) if correctly determined default bids had been used, and use the restored Bid(s) to determine a settlement. Otherwise the ISO shall use the Generator's correct or corrected default bid(s) to determine a settlement.

- 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.

- 23.4.2.5.21 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.
- 23.4.2.2.5.32 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.
- 23.4.2.5.43 The posting of the Day-Ahead schedule may be delayed if necessary for the completion of automated mitigation procedures.
- 23.4.2.5.54 Bids not mitigated under automated procedures shall remain subject to mitigation by other procedures specified herein as may be appropriate.
- 23.4.2.2.5.65 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 realtime 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 market-clearing priceLBMP.
- 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 <u>B</u>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 market-clearing priceLBMP" shall mean: (i) for a witholding seller, the LBMP or other market-clearing price at the generator bus of the withheld resource (or in the relevant Load Zone, if a clearing price is not calculated at the generator bus); 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

#### 23.4.3.3.1.1 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.

## 23.4.3.3.1.2 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

#### 23.4.3.3.2.1 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.

#### 23.4.3.3.3.2.3 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

Where:

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:

Daily Penalty =  $\max [(Multiplier * [\Sigma_g \blacktriangle Day-Ahead BPCG payment_g] + (Multiplier) \Sigma_h \Sigma_g ([Market Party MWh_{gh}] x [\blacktriangle Day Ahead LBMP@PTID_{gh}]) + \\ \max [\Sigma_h TCC Revenue Calc for Market Party_h, 0]), 0]$ 

g = an index running across all the Market Party's Generators <math display="block">h = for purposes of this Section 23.4.3.3.3, 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  $MWh_{gh}$  = the MWh of Energy scheduled in the Day-Ahead Market for Generator g in hour h

▲ Day Ahead LBMP@PTIDgh = 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  $Party_h = the change in TCC$  Revenues that the Market Party receives for hour h, determined when the ISO performs the relevant Day Ahead Market LBMP impact test

## 23.4.3.3.4 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:

Daily Penalty = Max [(Multiplier \*  $\Sigma_g$  [  $\blacktriangle$  simplified guarantee payment<sub>g</sub>]) +  $\Sigma_h \Sigma_g$  (Multiplier \* [updated reference level<sub>gh</sub> – original reference level<sub>gh</sub>]) \* max [MWh DAM<sub>gh</sub>, MWh RT<sub>gh</sub>, Market Party MWh<sub>gh</sub>, 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 23.4.3.3.3.2.2 or 23.4.3.3.3.2.3 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 Bbid 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 any part of the penalty that is withheld, and that is determined to be payable at the conclusion of the dispute resolution/FERC review process, 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 inappropriate 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.
Monitoring of Day-Ahead and real-time LBMPs shall include examination of the following two metrics (along with any additional monitoring tools and procedures)

that the ISO determines to be appropriate to achieve the purpose of this Section 23.4.4):

- (1) The ISO shall compute a rolling average of the hourly deviation of real-time zonal LBMPs from Day-Ahead zonal LBMPs. The hourly deviation shall be measured as: (zonal LBMP<sub>real time</sub> zonal LBMP<sub>day ahead</sub>). Each observation of the rolling-average time series shall be a simple average of all the hourly deviations over the previous four weeks, or such other averaging period determined by the ISO to be appropriate to achieve the purpose of this Section 23.4.4.
- (2) The ISO shall also compute the rolling average *percentage* deviation of real-time zonal LBMPs from Day-Ahead zonal LBMPs. This percentage deviation shall be calculated by dividing the rolling-average hourly deviation (defined in Section 23.4.4.2.1 (1) above) by the rolling-average level of Day-Ahead zonal LBMP over the same time period, using the averaging period(s) described in Section 23.4.4.2.1 (1), above.
- 23.4.4.2.2 The ISO shall compute the average hourly deviation between day ahead and real-time zone prices, measured as: (Zone Price<sub>real time</sub> / Zone Price<sub>day ahead</sub>) 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.
- 23.4.4.2.32 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.

23.4.4.2.43 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 it 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 5% or 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, and if the failure to offer or the sale of External Sale UCAP causes or contributes to an

increase in UCAP prices in the New York City Locality of 15 percent or more, provided such increase is at least \$2.500/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 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. 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/kilowattmonth, for each such violation of the above requirements the Market Participant shall be assessed an amount up to 1.5 times the market clearing price in the ICAP Spot Market Auction for each month during which Installed Capacity was withheld, 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.

An Installed Capacity Supplier shall be exempt from an Offer Floor if: (a) 23.4.5.7.2 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 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 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) its initial offer to supply Installed Capacity, and (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 Resource that is subject to an Offer Floor, in accordance with ISO Procedures. The Special

Case Resource shall continue to be subject to an Offer Floor for the following 11 months, for a total for 12 months. 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. 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. 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 an 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 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. 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.
- 23.4.5.8 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 Bbids 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.

  Monitoring of Day-Ahead and real-time LBMPs shall include examination of the following two metrics (along with any additional monitoring tools and procedures that the ISO determines to be appropriate to achieve the purpose of this Section 23.4.6):
  - (1) The ISO shall compute a rolling average of the hourly deviation of real-time zonal LBMPs from Day-Ahead zonal LBMPs. The hourly deviation shall be

measured as: (zonal LBMP<sub>real time</sub> - zonal LBMP<sub>day ahead</sub>). Each observation of the rolling-average time series shall be a simple average of all the hourly deviations over the previous four weeks, or such other averaging period determined by the ISO to be appropriate to achieve the purpose of this Section 23.4.6.

- (2) The ISO shall also compute the rolling average *percentage* deviation of real-time zonal LBMPs from Day-Ahead zonal LBMPs. This percentage deviation shall be calculated by dividing the rolling-average hourly deviation (defined in Section 23.4.6.2.1 (1) above) by the rolling-average level of Day-Ahead zonal LBMP over the same time period, using the averaging period(s) described in Section 23.4.6.2.1 (1), above.
- 23.4.6.2.2 The ISO shall compute the average hourly deviation between day ahead and real-time zone prices, measured as: (Zone Price<sub>real-time</sub> / Zone Price<sub>day ahead</sub>)

  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.
- 23.4.6.2.32 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 Bbids. 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**

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.

## 23.5 Other Mitigation Measures

## 23.5.1 Facilitation of Real-Time Mitigation in Constrained Areas

To facilitate the application of the Real-Time mitigation measures specified in this Attachment H for Constrained Areas, all Generators located in a Constrained Area that are capable of doing so shall respond to RTD Base Point Signals, unless such a Generator is subject to contractual obligations in existence prior to June 1, 2002 that would preclude such operation.

# 23.5.2 Market Power Mitigation Measures Applicable to In-City Unit Commitments for Local Reliability

23.5.2.1 If an In-City Generator is scheduled in any hour in the Day-Ahead Market to meet the reliability needs of a local system, the ISO will set the In-City Generator's Start-Up Bid to the lower of the Bid or the applicable reference level, which may include a Start-Up reference level calculated in accordance with Section 23.3.1.4.4.3 of these Mitigation Measures. In each hour an In-City Generator is scheduled in the Day-Ahead Market to meet the reliability needs of a local system, the ISO will set the In-City Generator's Minimum Generation Bid to the lower of the Bid or the applicable reference level.

## 23.5.3 Market Power Mitigation Measures Applicable to Sales of Spinning Reserves

- 23.5.3.1 Local reliability rules require that specified amounts of Spinning Reserves be provided by In-City Generators. The Spinning Reserve-capable portion of each Generator located in New York City must be made available to the ISO for purposes of meeting the New York City Spinning Reserve requirement.
- 23.5.3.2 The market power mitigation measures applicable to Spinning Reserves will be implemented when the ISO's least-cost dispatch requires that one or more

of the Generators located in New York City be committed to meet the In-City Spinning Reserve requirement. For any day that an In-City Generator is committed to meet the In-City Spinning Reserve requirement under circumstances where the Generator would not otherwise have been committed under the ISO's least-cost dispatch, the market power mitigation measures applicable to unit commitments, as described in Section 23.5.2, would apply.

23.5.3.3 In addition, In-City generators must Bbid zero (\$0) for the availability portion of Day-Ahead Spinning Reserves Bids. The implementation of this mitigation measure will have no effect on the ability of a Generator located in New York City to recover the market-clearing price established by the ISO for the sale of Spinning Reserves.

#### 23.5.4 FERC-Ordered Measures

In addition to any mitigation measures specified above, the ISO 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.

## 23.5.5 Redetermination of 10-Minute Non-Synchronized Reserves Prices

The following provisions shall be in effect for a period of twelve months from July 8, 2003: (i) if any 10-Minute Non-Synchronized Reserves prices are determined by the ISO, with the concurrence of the ISO Market Advisor, to reflect a significant abuse of market power, the ISO shall so notify the Market Parties within 24 hours of the initial posting of such prices (such prices being hereinafter referred to as "flagged prices"); (ii) the ISO shall determine, with the concurrence of the Market Advisor, within five business days of such notification whether a filing seeking the reimposition of a bid cap or some other market power mitigation measure for 10-Minute Non-Synchronized Reserves is warranted, and if such a filing is not warranted the

ISO shall notify the Market Parties that the flagged prices are final, subject to price correction
procedures for other reasons if applicable; and (iii) iIf the ISO determines, with the concurrence
of the Market Monitoring Unit Advisor, that a filing seeking reimposition of a Bbid cap or some
other market power mitigation measure for 10 Minute Non-Synchronized Reserves is
appropriate, such filing will request authorization from the Commission to redetermine the
$\underline{affected} flagged \ prices \ in \ accordance \ with \ such \ \underline{B} bid \ cap \ or \ other \ mitigation \ measure \ as \ may \ be$
approved by the Commission

## 23.6 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 ISO 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.

## 23.7 Effective Date

These Mitigation Measures shall be effective as of the date they are approved by the

FERC