

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 Incremental Energy and Minimum Generation Bids: An increase exceeding 300 percent or \$100 per MWh, whichever is lower; provided, however, that Incremental Energy 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:

23.3.1.2.1.2.1 Operating Reserves and Regulation Capacity Bids: A 300 percent increase or an increase of \$50 per MW, whichever is lower; provided, however, that such Bids below \$5 per MW shall be deemed not to constitute economic withholding.

23.3.1.2.1.2.2 Regulation Movement Bids: A 300 percent increase.

23.3.1.2.1.3 Start-Up Bids: A 200 percent increase.

23.3.1.2.1.4 Time-based Bid parameters: An increase of 3 hours, or an increase of 6 hours in total for multiple time-based Bid parameters. Time-based 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/MWh, 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:

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

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 \$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 Bid, 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, 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.

23.3.1.2.2.4 For Start-Up 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.

23.3.1.2.3 The following thresholds shall be employed by the ISO to identify economic withholding that requires the mitigation of a Generator that is

committed outside the ISO's economic evaluation process to protect NYCA or local area reliability in an area that is not a designated Constrained Area.

Whether the thresholds specified in Sections 23.3.1.2.3.3(i) through 23.3.1.2.3.3(v) below have been exceeded shall be determined with respect to a reference level determined as specified in Section 23.3.1.4 of these Mitigation Measures.

If provisions 23.3.1.2.3.1 and 23.3.1.2.3.2 below are met for a Generator in the New York Control Area that is not located in a designated Constrained Area, the ISO shall substitute a reference level for each Bid, or component of a Bid, for which the applicable threshold specified in provisions 23.3.1.2.3.3(i) through 23.3.1.2.3.3(vi) below is exceeded. Where mitigation is determined to be appropriate, the mitigated results will be used in all aspects of the NYISO's settlement process.

23.3.1.2.3.1 The Generator was committed outside the ISO's economic merit order selection process to protect or maintain New York Control Area or local system reliability as a Day-Ahead Reliability Unit ("DARU") or via a Supplemental Resource Evaluation ("SRE"), or was committed as a DARU or via SRE and was also dispatched Out-of-Merit above its minimum generation level to protect or maintain New York Control Area or local system reliability; and

23.3.1.2.3.2 One of the following three (i) – (iii) conditions in this Section 23.3.1.2.3.2 must be satisfied in order for mitigation to be applied:

- i the Market Party (including its Affiliates) that owns or offers the Generator is the only Market Party that could effectively solve the reliability need for which the Generator was committed or dispatched, or
- ii when evaluating an SRE that was issued to address a reliability need that multiple Market Parties' Generators are capable of solving, the NYISO only received Bids from one Market Party (including its Affiliates), or
- iii when evaluating a DARU, if the Market Party was notified of the need for the reliability commitment of its Generator prior to the close of the Day-Ahead Market.

23.3.1.2.3.3 The Bids or Bid components submitted for the Generator that were accepted outside the economic evaluation process to protect or maintain New York Control Area or local system reliability:

- i exceeded the Generator's Minimum Generation Bid reference level by the greater of 10% or \$10/MWh, or
- ii. exceeded the Generator's Incremental Energy Bid reference level by the greater of 10% or \$10/MWh, or
- iii. exceeded the Generator's Start-Up Bid reference level by 10%, or
- iv. exceeded the Generator's minimum run time, start-up time, and minimum down time reference levels by more than one hour in aggregate, or
- v. exceeded the Generator's minimum generation MW reference level by more than 10%, or
- vi. decreased the Generator's maximum number of stops per day below the Generator's reference level by more than one stop per day, or to one stop per day.

23.3.1.2.4 For In-City Generators committed in the Day-Ahead Market for local
reliability, additional Mitigation Measures are specified in Section 23.5.2.1.

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 that the information was submitted in compliance with the requirements of Section 4.1.9 of the ISO Services Tariff (Incremental Cost Recovery for Units Responding to Local Reliability Rule I-R3 or I-R5), or (ii) the total penalty calculated for a particular Day-Ahead or Real-Time Market day is less than \$5,000, in which case the ISO will not apply a penalty.

23.4.3.3.3.1 Day-Ahead Conduct and Market Impact Tests

23.4.3.3.3.1.1 Day-Ahead Conduct Test

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

23.4.3.3.3.1.2 Day-Ahead Impact Test

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

Generator but for the submission of inaccurate fuel type and/or fuel price information, test the Bids for both LBMP and guarantee payment impact in accordance with the appropriate provisions of Section 23.3.2.1 of these Mitigation measures.

23.4.3.3.1.3 Day-Ahead Reliability Units in a Constrained Area

Consistent with Section 23.5.2 of these Mitigation Measures, the conduct and impact thresholds for a Day-Ahead Reliability Unit in a Constrained Area shall each be zero.

23.4.3.3.2 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

23.4.3.3.2.2 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.

23.4.3.3.3.3 Day-Ahead Market Penalty Calculation

If the results of the Day-Ahead Market impact test indicate that the Market Party's Bid had either LBMP or guarantee payment impact 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:

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

Where:

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

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 of 1.0 or 1.5. The ISO shall use a 1.0 Multiplier if the Market Party has not been penalized for inaccurately reporting fuel type or fuel

price information in the Day-Ahead Market over the 6 months prior to the market-day for which the penalty is being calculated. In all other cases the ISO shall use a 1.5 Multiplier.

▲ Day-Ahead BPCG payment_g = 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@PTID_{gh} = 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

23.4.3.3.3.4 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 then the ISO shall charge the Market Party a penalty, calculated for each penalized day, for each of its Generators, for each hour of the day, as follows:

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

Where

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

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

Multiplier = a factor of 1.0 or 1.5. The ISO shall use a 1.0 Multiplier if the Market Party has not been penalized for inaccurately reporting fuel type or fuel price information in the Real-Time Market over the 6 months prior to the market-day for which the penalty is being calculated. In all other cases the ISO shall use a 1.5 Multiplier.

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

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

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

WHERE:

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

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

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

23.5 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.