

## **DRAFT – FOR DISCUSSION PURPOSES ONLY**

### **For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust

#### **26 Attachment K - Creditworthiness Requirements For Customers**

This Attachment K applies to all Customers and all applicants seeking to become Customers.

“Customer,” as used in this Attachment K, shall also mean an applicant seeking to become a Customer.

## **26.1 Minimum Participation Criteria**

### **26.1.1 General**

To participate in the ISO-Administered Markets, in addition to satisfying any other eligibility requirements set forth in the ISO Tariffs, each Customer must satisfy, and at all times remain in compliance with, the following requirements:

- (a) Risk Management. Customer shall maintain current, written risk management policies and procedures that address those risks that could materially and adversely affect Customer's ability to pay its ISO invoices when due, including, but not limited to, credit risks, liquidity risks, and market risks.
- (b) Training. Each employee and agent that Bids or schedules in the ISO-Administered Markets on behalf of Customer shall have appropriate training and/or experience to transact on behalf of Customer in the ISO-Administered Markets. In addition, each employee and agent that Bids on Virtual Transactions or TCCs on behalf of Customer shall successfully complete the designated ISO-administered online training course on Virtual Transactions and/or TCCs one time, as applicable; *provided, however*, this requirement does not apply to a Transmission Owner as a result of its receipt of Net Auction Revenue.
- (c) Operational Capabilities. Customer shall have appropriate personnel resources and technical abilities to promptly and effectively respond to all ISO

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communications and directions related to settlements, billing, credit requirements, and other financial matters.

- (d) Capitalization. Customer, or its guarantor with the provision of an unlimited guaranty in compliance with Section 26.5.4 of this Attachment K, shall meet the minimum capitalization criteria set forth below or post additional security in accordance with the following:
  - i. Maintain at least US \$10 million in assets or at least US \$1 million in tangible net worth as evidenced by Customer's or its guarantor's most recent audited annual financial statements; or
  - ii. If Customer is unable to meet the minimum capitalization criteria set forth in Section 26.1.1(d)i of this Attachment K, post with the ISO either (1) \$200,000 to participate in any/all of the ISO-Administered Markets other than the TCC market, which security Customer may not use to support any ISO credit requirements, or (2) \$500,000 to participate in any/all of the ISO-Administered Markets including the TCC market, which security the Customer may not use to support any ISO credit requirements.

The ISO will independently verify that adequate capitalization is being maintained on an annual basis. In addition, if at any time a Customer that satisfied the capitalization requirement set forth in Section 26.1.1(d) above by demonstrating compliance with the criteria set forth in Section 26.1.1(d)i experiences a change in financial position such that Customer no longer

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satisfies these criteria, Customer shall notify the ISO promptly of this change in financial position and post the appropriate amount of security in accordance with Section 26.1.1(d)ii of this Attachment K.

#### **26.1.2 Annual Certification**

Each Customer must demonstrate ongoing compliance with the minimum participation requirements set forth in Section 26.1.1 of this Attachment K by submitting to the ISO on or before April 30 of each year a notarized officer's certificate, signed by an authorized officer of Customer with signatory authority, in a form acceptable to the ISO, certifying that Customer is in compliance with each of the minimum participation requirements. Each NYISO applicant must submit an initial notarized officer's certificate with its Completed Application.

#### **26.1.3 Verification of Risk Management Policies and Procedures**

##### **26.1.3.1 Scope**

- (a) Each applicant applying to participate in the TCC market shall submit its risk management policies and procedures for verification prior to commencing any activity in the TCC market.
- (b) Each Customer that participates in the TCC market, except those Customers that solely own Grandfathered Rights, Grandfathered TCCs and/or Fixed Price TCCs, shall submit its risk management policies and procedures to the ISO annually by no later than April 30 of each calendar year.

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- (c) Each Customer that participates in the TCC market and meets the criteria below shall be subject to annual verification:
  - i. does not solely own Grandfathered Rights, Grandfathered TCCs and/or Fixed Price TCCs, and
  - ii. has, for any month in the immediately preceding 36 months, had a concentration of negative or low positive TCCs. For purposes of this Section 26.1.3.1(c)(ii), a Customer shall be deemed to have a concentration of negative or low positive TCCs if the net amount owed by the Customer to the ISO for “TCC Congestions Rents” on its consolidated invoices for the month is greater than \$0 or the net amount owed by the ISO to the Customer for “TCC Congestion Rents” on its consolidated invoices for the month is less than or equal to \$50,000.
- (d) For Customers that are not already subject to verification as detailed in Section 26.1.3.1(c), the ISO may select 10-20% of those Customers per year for review on a random basis. Customers randomly selected for risk management verification and satisfactorily verified shall be excluded from such verification based on a random selection for the subsequent two years.
- (e) A Customer notified by the ISO that it will be subject to verification shall, within two (2) business days of the Customer’s receipt of the ISO’s notice, submit to the ISO a copy of its current governing risk management policies and procedures.

- (f) Where a Customer has not made any material changes to its risk management policies and procedures since its last submission to the ISO, the Customer may submit a certificate to the ISO in lieu of resubmission of its risk management policies and procedures. The certificate must be in a form acceptable to the ISO, be signed by an authorized officer of the Customer, and state that the Customer's risk management policies and procedures have not materially changed since its last submission.

#### **26.1.3.2 Verification Standards and Process**

The ISO will assess the Customer's (or applicant's) risk management policies and procedures to confirm those policies and procedures conform to the risk management standards and practices set forth in this Section 26.1.3.2. Through such assessment, the ISO will verify that:

1. Customer's risk management framework is documented in a risk policy addressing market, credit and liquidity risks that have been approved by the Customer's risk management function, which includes appropriate corporate persons or bodies that are independent of the Customer's trading functions, such as a risk management committee, a designated risk officer, a Customer's board of directors or board committee, or, if applicable, a board of directors or board committee of a Customer's parent company.

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2. Customer maintains an organizational structure with clearly defined roles and responsibilities that appropriately, and to the extent practical, segregate trading functions from risk management functions (*e.g.*, segregation of front, middle, and back office functions).
3. Customer has established delegations of authority specifying the transactions into which its traders are allowed to enter.
4. Customer ensures that its traders have adequate training and/or experience relative to their delegations of authority in the systems and markets in which they transact.
5. As appropriate, risk limits are in place to control risk exposures.
6. Reporting is in place to ensure that risks are adequately communicated throughout the organization.
7. Processes are in place for qualified independent review of trading activities.
8. As appropriate, there is periodic valuation or mark-to-market of risk positions.

A Customer subject to risk management verification and satisfactorily verified by the ISO shall inform the ISO of any material change in its risk management policies and procedures within five (5) business days of such change.

For each Customer subject to risk management verification, continued eligibility to participate in the ISO-Administered Markets is conditioned upon the ISO notifying the Customer of successful completion of the ISO's verification; *provided, however*, that if the ISO notifies the

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Customer in writing that the Customer's risk management policies and procedures did not satisfy the standards set forth in this Section 26.1.3.2, the Customer shall have 30 calendar days to submit revised risk management policies and procedures, which have been revised to address any deficiencies identified by the ISO, prior to the ISO declaring the Customer in default for failure to comply with the creditworthiness requirements of the ISO Tariffs. If, prior to the expiration of such 30 calendar days, the Customer demonstrates to the ISO that it has filed with the Commission an appeal of the ISO's risk management verification determination, then the Customer shall retain its transaction rights and not be declared in default for failure to comply with the creditworthiness requirements of the ISO Tariffs, pending the Commission's determination on the Customer's appeal.

The ISO may retain a third party to perform the review and verification function described in this Section 26.1.3.2. The ISO and any third party it may retain will treat as Confidential Information the documentation provided by a Customer under this Section 26.1.3.2, consistent with the applicable provisions of Attachment F to the ISO OATT.

The ISO shall have the right to charge a Customer subject to verification under this Section 26.1.3 for any costs incurred by the ISO related to the ISO's verification of the Customer's risk management policies and procedures.

#### **26.1.4 Additional Information**

Each Customer shall submit to the ISO, upon request, any information or documentation reasonably required for the ISO to monitor and evaluate Customer's creditworthiness and



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compliance with requirements set forth in the ISO Tariffs, ISO Procedures, and/or ISO Agreements related to settlements, billing, credit requirements, and other financial matters.

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## **26.2 Reporting Requirements**

### **26.2.1 All Customers shall be required to comply with the reporting requirements in this Section 26.2.1**

#### **26.2.1.1 References**

The ISO may require a Customer to provide references from one (1) bank and up to three (3) utilities. A Customer that does not have utility references, may substitute trade payable vendor references.

#### **26.2.1.2 Prior Bankruptcy or Default**

A Customer shall inform the ISO of any prior bankruptcy declarations or material defaults by the Customer or its predecessors, subsidiaries, or Affiliates occurring within the previous five (5) years.

#### **26.2.1.3 Investigations**

A Customer shall inform the ISO of the existence of any ongoing investigations of which the Customer is aware by the Securities and Exchange Commission, the Department of Justice, the Federal Energy Regulatory Commission, or the New York Public Service Commission which could have a material impact on the Customer's financial condition.

#### **26.2.1.4 Material Change in Financial Status**

A Customer shall inform the ISO of any material change in its financial status within five (5) business days, including but not limited to: (a) a downgrade of a long- or short-term debt rating by any ISO-approved rating agency; (b) placement on a negative credit watch by any ISO-

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approved rating agency; (c) a bankruptcy filing, insolvency, or a default under any financing agreement; (d) resignation or termination of a key officer; (e) initiation of a lawsuit that could materially and adversely impact current or future financial performance; or (f) restatement of prior financial statements.

#### **26.2.1.5 Change in Peak Load**

A Load Serving Entity shall inform the ISO as soon as practicable if it expects its peak Load to increase by fifteen percent (15%) or more above its peak Load during the Prior Equivalent Capability Period.

#### **26.2.1.6 Financial Statements**

Customer shall keep on file with the ISO its most recent annual financial statements (including, but not limited to, balance sheet and income statement), which shall be submitted to the ISO annually within ten (10) days of such statements becoming available and within ninety (90) days of the end of the fiscal year of such Customer. If such financial statements are not audited, Customer shall submit with the financial statements a certification from an officer of the Customer, in a form acceptable to the ISO, certifying the accuracy of the financial statements.

If a Customer does not routinely prepare financial statements, Customer shall submit equivalent financial information annually, as required in the paragraph above, with a certification from an officer of the Customer certifying the accuracy of the financial information submitted, in forms acceptable to the ISO.

The ISO may grant an extension for the provision of the required financial information under this Section 26.2.1.6 upon a showing of good cause.

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#### **26.2.2 Customers Requesting Unsecured Credit**

In addition to the reporting requirements in Section 26.2.1., above, a Customer requesting Unsecured Credit, including a request for an Equivalency Rating, shall be required to comply with the reporting requirements of this Section 26.2.2.

##### **26.2.2.1 Financial Statements**

A Customer requesting Unsecured Credit shall provide to the ISO audited annual financial statements from the most recent three (3) years and its recent quarterly financial statement. Thereafter, the Customer shall provide audited annual financial statements to the ISO within ten (10) days of such statements becoming available and within ninety (90) days of the end of each fiscal year and shall provide quarterly financial statements to the ISO within sixty (60) days of the end of each quarter. The ISO may grant an extension for the provision of quarterly and annual financial statements upon a showing of good cause.

##### **26.2.2.2 Publicly-Traded Customer**

A publicly-traded Customer shall provide financial statements on Form 10-K and 10-Q, respectively. A publicly-traded Customer shall also provide Form 8-K reports within five (5) business days of their issuance. Information available on EDGAR shall be deemed provided by a Customer that directs the ISO to obtain it there.

##### **26.2.2.3 Privately-Held Customer**

A Customer that is not publicly-traded shall provide financial statements that include a balance sheet including a statement of stockholders' equity, an income statement, a statement of cash flow, notes to the financial statement, and an unqualified auditor's opinion.

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**26.2.2.4 Government Entities**

Notwithstanding Section 26.2.2.1 of this Attachment K, government entities that do not normally prepare quarterly financial statements shall not be required to provide them to qualify for Unsecured Credit.

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**26.3 Investment Grade Customers**

**26.3.1 Senior Long-Term Unsecured Debt Rating**

A Customer shall be deemed an Investment Grade Customer if its senior long-term unsecured debt rating is BBB- or higher by Standard & Poor's or Fitch, or Baa3 or higher by Moody's. If a Customer has been rated by two of these agencies, the ISO shall use the lower of the two ratings. If a Customer is rated by all three of these rating agencies, and one rating agency differs in its rating of a Customer from the other two, the ISO shall use the matching ratings. If a Customer is rated differently by all three of these rating agencies, the ISO shall use the middle rating. A Customer that has not been rated by any of the three above-named rating agencies may use a rating from Dominion. Notwithstanding the above, a Customer with a senior long-term unsecured debt rating from any of the approved rating agencies below BBB- (or Baa3) shall be deemed to be a Non-Investment Grade Customer.

**26.3.2 Issuer Rating**

If a Customer does not have a senior long-term unsecured debt rating from Standard & Poor's, Fitch, Moody's or Dominion, the Customer shall nevertheless be deemed an Investment Grade Customer if it has an issuer rating of BBB or higher from Standard & Poor's, Fitch, or Dominion, or Baa2 or higher from Moody's.

A Customer that has a senior long-term unsecured debt rating from Standard & Poor's, Fitch, Moody's or Dominion shall not be permitted to substitute an issuer rating. The rules established in Section 26.3.1 of this Attachment K regarding conflicting ratings and the use of a Dominion rating shall apply to issuer ratings. Notwithstanding the above, a Customer with an

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issuer rating from any of the approved rating agencies below BBB (or Baa2) shall be deemed to be a Non-Investment Grade Customer.

#### **26.3.3 Equivalency Rating**

A Customer that has not received a senior long-term unsecured debt rating or an issuer rating from Standard & Poor's, Moody's, Fitch, or Dominion may request that the ISO assign it an Equivalency Rating. The ISO shall determine an Equivalency Rating using Moody's KMV RiskCalc™. A Customer with an Equivalency Rating of BBB or higher shall be deemed to be an Investment Grade Customer. The ISO shall review a Customer's Equivalency Rating at least once each quarter. A Customer may not use an Equivalency Rating in the event that it is rated by an ISO-approved rating agency.

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#### **26.4 Operating Requirement and Bidding Requirement**

##### **26.4.1 Purpose and Function**

The Operating Requirement is a measure of a Customer's expected financial obligations to the ISO based on the nature and extent of that Customer's participation in ISO-Administered Markets. A Customer shall be required to allocate Unsecured Credit, where allowed, and/or provide collateral in an amount equal to or greater than its Operating Requirement. Upon a Customer's written request, the ISO will provide a written explanation for any changes in the Customer's Operating Requirement.

The Bidding Requirement is a measure of a Customer's potential financial obligation to the ISO based upon the bids that Customer seeks to submit in an ISO-administered TCC or ICAP auction. A Customer shall be required to allocate Unsecured Credit, where allowed, and/or provide collateral in an amount equal to or greater than its Bidding Requirement prior to submitting bids in an ISO-administered TCC or ICAP auction.

##### **26.4.2 Calculation of Operating Requirement**

The Operating Requirement shall be equal to the sum of (i) the Energy and Ancillary Services Component; (ii) the External Transaction Component; (iii) the UCAP Component; (iv) the TCC Component; (v) the WTSC Component; (vi) the Virtual Transaction Component; ~~(vii) the DADRP Component; (viii) the DSASP Component; (ix) (vii)~~ the Projected True-Up Exposure Component; and ~~(viii)~~ the Former RMR Generator Component, where:

###### **26.4.2.1 Energy and Ancillary Services Component**

The Energy and Ancillary Services Component shall be equal to:



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- (a) For Customers without a prepayment agreement, the greater of either:

$$\frac{\text{Basis Amount for Energy and Ancillary Services}}{\text{Days in Basis Month}} * 16$$

- or -

$$\frac{\text{Total Charges Incurred for Energy and Ancillary Services for Previous Ten (10) Days}}{10} * 16$$

- (b) For Customers that qualify for a prepayment agreement, subject to the ISO's credit analysis and approval, and execute a prepayment agreement in the form provided in Appendix K-1, the greater of either:

$$\frac{\text{Basis Amount for Energy and Ancillary Services}}{\text{Days in Basis Month}} * 3$$

-or-

$$\frac{\text{Total Charges Incurred for Energy and Ancillary Services for Previous Ten (10) Days}}{10} * 3$$

- (c) For new Customers, the ISO shall determine a substitute for the Basis Amount for Energy and Ancillary Services for use in the appropriate formula above equal to:

$$EPL * 720 * AEP$$

where:

EPL = estimated peak Load for the Capability Period; and

AEP = average Energy and Ancillary Services price during the Prior Equivalent Capability Period after applying the Price Adjustment.

#### **26.4.2.2 External Transaction Component**

The External Transaction Component shall equal the sum of the Customer's (i) Import Credit Requirement, (ii) Export Credit Requirement, (iii) Wheels Through Credit Requirement, and (iv) the net amount owed to the ISO for the settled External Transaction Component Transactions.

##### **26.4.2.2.1 Import Credit Requirement**

For a given month, the Import Credit Requirement shall apply to any Customer that Bids to Import in the Day-Ahead Market ("DAM") unless (i) the Customer has at least 50 scheduled Day-Ahead Import Bids in the three-month period ending on the 15<sup>th</sup> day of the preceding month (or the six-month period ending on the 15<sup>th</sup> day of the preceding month if the Customer has fewer than 50 scheduled Day-Ahead Import Bids in the immediately preceding three-month period), and (ii) fewer than 25% of the MWhs of such scheduled Day-Ahead Import Bids were settled at a loss to the Customer.

The Import Credit Requirement shall equal the sum of the amounts calculated for each Bid in accordance with the appropriate formulas below:

**(1) Upon submission of a DAM Import Bid until posting of the applicable DAM schedule/price.**

The ISO will calculate the required credit support for pending DAM Import Bids for a market day three days prior to the DAM close for that market day. The ISO will calculate the required credit support for DAM Import Bids that are submitted after the commencement of the initial credit evaluation upon Bid submission. The ISO will categorize each Import Bid into one of the 18 Import Price Differential

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(IPD) groups set forth in the IPD chart in Section 26.4.2.2.5 below, as appropriate, based upon the season and time-of-day of the Import Bid. The amount of credit support required in \$/MWh that applies to an Import Bid shall equal the 97<sup>th</sup> percentile level of the following: the hourly average Energy price calculated in the Real-Time Market at the location associated with the Import Bid, minus the Energy price calculated in the DAM at the same location and time, with the dataset used to perform this calculation consisting of all hours that are in the same IPD group as the hour to which the Import Bid applies, and that occurred no earlier than April 1, 2005 nor later than the end of the calendar month preceding the month to which the Import Bid applies. The amount of credit support required in \$/MWh shall not be less than \$0/MWh.

The credit requirement for each Import Bid shall be calculated as follows:

$$Bid_{MWhB} * Max (IPD_{CS}, 0)$$

Where:

$Bid_{MWhB}$  = the total quantity of MWhs that a Customer Bids to Import in a particular hour and at a particular location.

$IPD_{CS}$  = the amount of credit support required, in \$/MWh, for an Import Bid as described above, for the location associated with the Import Bid and for the IPD group that contains the hour to which the Import Bid applies.

**(2) Upon posting of the applicable DAM schedule/price until completion of the hour Bid in real-time for a DAM Import Bid.**

The credit requirement for each Import Bid shall be calculated as follows:

$$SchBid_{MWhI} * Max(IPD_{CS}, 0)$$

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Where:

$SchBid_{MWhI}$  = the total quantity of MWhs that is scheduled in the DAM in a particular hour and at a particular location as a result of the Customer's Import Bid.

$IPD_{CS}$  = the amount of credit support required, in \$/MWh, for an Import Bid as described above, for the location associated with the Import Bid and for the IPD group that contains the hour to which the Import Bid applies.

- (3) Upon completion of the hour Bid in real-time for a DAM Import Bid until the net amount owed to the ISO is determined for settled External Transactions.**

The credit requirement for each Import Bid shall be calculated as follows:

$$Max((BalPay_{\$} - DAMPay_{\$}), 0)$$

Where:

$BalPay_{\$}$  =  $(SchBid_{MWhI} - Actual_{MWhI}) * RT\ LBMP_I$

$DAMPay_{\$}$  =  $SchBid_{MWhI} * DAM\ LBMP_I$

$SchBid_{MWhI}$  = the total quantity of MWhs that is scheduled in the DAM in a particular hour at a particular location as a result of the Customer's Import Bid.

$Actual_{MWhI}$  = the total quantity of MWhs that is scheduled in real-time associated with the Customer's Import Bid in a particular hour and at a particular location for the hour completed.

$DAM\ LBMP_I$  = the Day-Ahead LBMP in a particular hour and at a particular location associated with the Customer's Import Bid.

$RT\ LBMP_I$  = the Real-Time LBMP in a particular hour and at a particular location associated with the Customer's Import Bid.

#### **26.4.2.2.2 Export Credit Requirement**

The Export Credit Requirement shall apply to any Customer that Bids to Export from the DAM or Hour-Ahead Market ("HAM").

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The Export Credit Requirement shall equal the sum of the amounts calculated for each Bid in accordance with the appropriate formulas below:

**(1) Upon submission of a DAM Export Bid until posting of the applicable DAM schedule/price.**

The ISO will calculate the required credit support for pending DAM Export Bids for a market day three days prior to the DAM market close for that market day.

The ISO will calculate the required credit support for DAM Export Bids that are submitted after the commencement of the initial credit evaluation upon Bid submission. The ISO will categorize each Export Bid into one of the 18 Export Price Differential (EPD) groups set forth in the EPD chart in Section 26.4.2.2.5 below, as appropriate, based upon the season and time-of-day of the Export Bid.

The amount of credit support required in \$/MWh that applies to an Export Bid shall equal the 97<sup>th</sup> percentile level of the following: the Energy price calculated in the DAM at the location associated with the Export Bid, minus the hourly average Energy price calculated in the Real-Time Market at the same location and time, with the dataset used to perform this calculation consisting of all hours that are in the same EPD group as the hour to which the Export Bid applies, and that occurred no earlier than April 1, 2005 nor later than the end of the calendar month preceding the month to which the Export Bid applies. The amount of credit support required in \$/MWh shall not be less than \$0/MWh.

The credit requirement for all DAM Export Bids with the same hour/date and location shall be calculated as follows:

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$$\left( \text{Max} \left( \left( \text{Max}_N (\text{Bid}_{MWh} * \text{Bid}_{\$E}) \right), (\text{BidMax}_{MWhB} * \text{EPD}_{CS}) \right) \right)$$

Where:

$\text{Bid}_{MWh}$  = the total quantity of MWhs that a Customer Bids to Export in the DAM in a particular hour and at a particular location at or below each Bid Price.

$\text{Bid}_{\$E}$  = the Bid Price in \$/MWh at which the Customer Bids to purchase the  $\text{Bid}_{MWh}$  of Exports in a particular hour and at a particular location.

$N$  = the set of hourly Export Bid Prices in a particular hour and at a particular location.

$\text{BidMax}_{MWhB}$  = the total quantity of MWhs that a Customer Bids to Export in the DAM in a particular hour and at a particular location.

$\text{EPD}_{CS}$  = the amount of credit support required, in \$/MWh, for an Export Bid as described above, for the location associated with the Export Bid and for the EPD group that contains the hour to which the Export Bid applies.

**(2) Upon posting of the applicable DAM schedule/price until completion of hour Bid in real-time for a DAM Export Bid.**

The credit requirement for each Export Bid shall be calculated as follows:

$$\left( \text{SchBid}_{MWhE} * \left( \text{Max}(\text{EPD}_{CS}, \text{DAM LBMP}_E) \right) \right)$$

Where:

$\text{SchBid}_{MWhE}$  = the total quantity of MWhs that is scheduled in the DAM in a particular hour at a particular location as a result of the Customer's Export Bid.

$\text{EPD}_{CS}$  = the amount of credit support required, in \$/MWh, for an Export Bid as described above, for the location associated with the Export Bid and for the EPD group that contains the hour to which the Export Bid applies.

$\text{DAM LBMP}_E$  = the Day-Ahead LBMP in a particular hour and at a particular location associated with the Customer's Export Bid.

- (3) **From submission of a HAM Export Bid until completion of the hour Bid in real-time.**

**i. Non-CTS Interface Bids to Export .**

The ISO will calculate the required credit support for pending HAM non-CTS Interface Bids to Export for a market day three days prior to the DAM close for that market day. The ISO will calculate the required credit support for HAM non-CTS Interface Bids to Export that are submitted after the commencement of the initial credit evaluation upon Bid submission. The amount of credit support required in \$/MWh that applies to HAM non-CTS Interface Bids Export in the same hour/date and at the same location shall equal the maximum amount of the payment potentially due to the ISO based on the MWhs of Exports Bid for purchase at each bid price in a particular hour and at a particular location. The credit requirement for all HAM non-CTS Interface Bids to Export with the same hour/date and location shall be calculated as follows:

$$\left( \text{Max}_N \left( \left( \text{Max}(\text{Bid}_{\text{MWhE}}, 0) \right) * \text{Bid}_{\$E} \right) \right)$$

Where:

$\text{Bid}_{\text{MWhE}}$	=	the total quantity of MWhs that a Customer Bids to Export in the HAM in a particular hour and at a particular location at or below each bid price minus the MWhs of Exports scheduled in the DAM in the same hour at the same location.
$\text{Bid}_{\$E}$	=	the bid price in \$/MWh at which the Customer Bids to purchase the $\text{Bid}_{\text{MWhE}}$ of Exports in a particular hour and at a particular location.

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$N$  = the set of hourly Export bid prices in a particular hour and at a particular location.

**ii. CTS Interface Bids to Export.**

For CTS Interface Bids to Export credit support will be calculated at HAM close. The amount of credit support required in \$/MWh that applies to such bid shall equal the sum of the time-weighted hourly RTC price for each of the 15-minute intervals within the bid hour, not to be less than zero.

The credit requirement for each CTS Interface Bid to Export shall be calculated as follows:

$$\text{Max} \left( \sum_N (RTC_{\$/MWhcts} * Bid_{MWhscts} * \text{Hourly Weight}), 0 \right)$$

Where:

$N$  = each 15-minute interval within the bid hour.

$RTC_{\$/MWhcts}$  = most recently available RTC price for  $N$  in \$/MWh at the location associated with the CTS Interface Bid to Export

$Bid_{MWhscts}$  = the total quantity of MWhs in a Customer's CTS Interface Bid to Export for  $N$  in a particular hour and at a particular location minus the MWhs of Exports scheduled in the DAM in same hour at the same location.

Hourly Weight = 0.25

**(4) Upon completion of the hour Bid in real-time for an Export Bid until the net amount owed to the ISO is determined for settled External Transactions.**

The amount of credit support required will equal the sum of the Day-Ahead Credit Calculation and Real-Time Credit Calculation for each completed hour.

The credit requirement for each Export Bid shall be calculated as follows:

Day-Ahead Credit Calculation + Real-Time Credit Calculation



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The Day-Ahead Credit Calculation only applies to DAM Export Bids and the Real-Time Credit Calculation applies to all HAM Export Bids including HAM Bids associated with a DAM Bid.

Where:

Day-Ahead Credit Calculation = Max (Adjusted Export Day-Ahead Credit Calculation, 0)

Adjusted Export Day-Ahead Credit Calculation = the credit requirement calculated in accordance with section 26.4.2.2.2(2) minus the Balancing Payment.

$$\text{Balancing Payment} = \text{Max}((\text{SchBid}_{MWhE} - \text{Actual}_{MWhE}), 0) * \text{RT LBMP}_E$$

$\text{SchBid}_{MWhE}$  = the total quantity of MWhs that is scheduled in the DAM in a particular hour and at a particular location as a result of the Customer's Export Bid.

$\text{Actual}_{MWhE}$  = the total quantity of MWhs that is scheduled in real-time associated with the Customer's Export Bid in a particular hour and at a particular location for the hour completed.

$\text{RT LBMP}_E$  = the Real-Time LBMP in a particular hour and at a particular location associated with the Customer's Export Bid.

$$\text{Real-Time Credit Calculation} = \text{Max}((\text{Max}((\text{Actual}_{MWhE} - \text{SchBid}_{MWhE}), 0) * \text{RT LBMP}_E), 0)$$

$\text{Actual}_{MWhE}$  = the total quantity of MWhs that is scheduled in real-time associated with the Customer's Export Bid in a particular hour and at a particular location for the hour completed.

$\text{SchBid}_{MWhE}$  = the total quantity of MWhs that is scheduled in the DAM in a particular hour and at a particular location as a result of the Customer's Export Bid.

$\text{RT LBMP}_E$  = the Real-Time LBMP in a particular hour and at a particular location associated with the Customer's Export Bid.

**26.4.2.2.3 Wheels Through Credit Requirement**

The Wheels Through Credit Requirement shall apply to any Customer that Bids to Wheel Through in the DAM or HAM.

The Wheels Through Credit Requirement shall equal the sum of the amounts calculated for each Bid in accordance with the appropriate formulas below:

**(1) Upon submission of a DAM Wheels Through Bid until posting of the applicable DAM schedule/price.**

The ISO will calculate the required credit support for pending DAM Wheels Through Bids for a market day three days prior to the DAM close for that market day. The ISO will calculate the required credit support for DAM Wheels Through Bids that are submitted after the commencement of the initial credit evaluation upon Bid submission. The amount of credit support required in \$/MWh that applies to the DAM Wheels Through Bid shall equal the maximum payment potentially due to the ISO based on the Customer's Bid Prices on the Bid curve. The credit requirement for each Wheels Through Bid shall be calculated as follows:

$$Max(Max_N(BidPt_{MWhN} * Bid\$/_{MWhN}), 0)$$

Where:

N = each Bid Price on the Bid curve.

BidPt<sub>MWhN</sub> = the MWhs associated with the Bid Price on the Bid curve.

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$Bid_{\$/MWhN}$  = the amount that the customer is willing to pay for congestion in \$/MWh on the Bid curve associated with the Customer's Wheels Through Bid.

- (2) **Upon posting of the applicable Wheels Through DAM schedule/price until completion of the hour Bid in real-time.**

The credit requirement for each DAM Wheels Through Bid shall be calculated as follows:

$$Max(SchBid_{MWhW} * (DAM LBMP_{POW} - DAM LBMP_{POI}), 0)$$

Where:

$SchBid_{MWhW}$  = the total quantity of MWhs scheduled in the DAM as a result of the Customer's Bid to schedule Wheels Through.

$DAM LBMP_{POI}$  = the Day-Ahead LBMP in the hour and at the Point of Injection associated with the Wheels Through Bid.

$DAM LBMP_{POW}$  = the Day-Ahead LBMP in the hour and at the Point of Withdrawal associated with the Wheels Through Bid.

- (3) **Upon creation of a HAM Wheels Through Bid until the completion of the hour Bid in real-time.**

The ISO will calculate the required credit support for pending HAM Wheels Through Bids for a market day three days prior to the DAM close for that market day. The ISO will calculate the required credit support for HAM Wheels Through Bids that are submitted after the commencement of the initial credit evaluation upon Bid submission. The amount of credit support required in \$/MWh that applies to HAM Wheels Through Bid shall equal the price of the maximum value of exposure based on bid prices on the Bid curve.

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The credit requirement for each Wheels Through Bid shall be calculated as follows:

$$\text{Max}(\text{Max}_N(\text{Max}(\text{BidPt}_{MWhW}, 0) * \text{Bid}\$/MWhN), 0)$$

Where:

N = each bid price on the Bid curve.

BidPt<sub>MWhW</sub> = the MWhs associated with the bid price on the Bid curve minus the MWhs of the DAM Bid with same hour/date, location and Bid transaction ID.

Bid\$<sub>/MWhN</sub> = the amount that the customer is willing to pay for congestion in \$/MWh on the Bid curve associated with the Customer's Wheels Through Bid.

- (4) Upon completion of the hour Bid in real-time for a Wheels Through Bid until the net amount owed to the ISO is determined for settled External Transactions.**

The amount of credit support required will equal the sum of the Day-Ahead Credit Calculation and Real-Time Credit Calculation for each completed hour.

The credit requirement for each Wheels Through Bid shall be calculated as follows:

$$\text{Day-Ahead Credit Calculation} + \text{Real-Time Credit Calculation}$$

The Day-Ahead Credit Calculation only applies to DAM Wheels Through Bids and the Real-Time Credit Calculation applies to all HAM Wheels Through Bids including HAM Bids associated with a DAM Bid.

Where:

$$\text{Day-Ahead Credit Calculation} = \text{Max}(\text{Adjusted Wheels Through Day-Ahead Credit Calculation}, 0)$$

Adjusted Wheels Through Day-Ahead Credit Calculation = the credit requirement calculated in section 26.4.2.2.3(2) minus the Balancing Payment.

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$$\text{Balancing Payment} = \text{Max}((\text{SchBid}_{\text{MWhW}} - \text{Actual}_{\text{MWhW}}), 0) * (\text{RT LBMP}_{\text{POW}} - \text{RT LBMP}_{\text{POI}})$$

$\text{SchBid}_{\text{MWhW}}$  = the total quantity of MWhs that is scheduled in the DAM as a result of the Customer's Wheels Through Bid.

$\text{Actual}_{\text{MWhW}}$  = the total quantity of MWhs that is scheduled in real-time associated with the Customer's Wheels Through Bid for the hour completed.

$\text{RT LBMP}_{\text{POI}}$  = the Real-Time LBMP in the hour and at the Point of Injection associated with the Wheels Through Bid.

$\text{RT LBMP}_{\text{POW}}$  = the Real-Time LBMP in the hour and at the Point of Withdrawal associated with the Wheels Through Bid.

$$\text{Real-Time Credit Calculation} = \text{Max}(\text{Max}((\text{Actual}_{\text{MWhW}} - \text{SchBid}_{\text{MWhW}}), 0) * (\text{RT LBMP}_{\text{POW}} - \text{RT LBMP}_{\text{POI}}), 0)$$

$\text{SchBid}_{\text{MWhW}}$  = the total quantity of MWhs that is scheduled in the DAM as a result of the Customer's Bid to Wheel Through Energy.

$\text{Actual}_{\text{MWhW}}$  = the total quantity of MWhs that is scheduled in real-time associated with the Customer's Wheels Through Bid for the hour completed.

$\text{RT LBMP}_{\text{POI}}$  = the Real-Time LBMP in the hour and at the Point of Injection associated with the Wheels Through Bid.

$\text{RT LBMP}_{\text{POW}}$  = the Real-Time LBMP in the hour and at the Point of Withdrawal associated with the Wheels Through Bid.

#### 26.4.2.2. 4 Calculation of Price Differentials

##### Import Price Differential (IPD) Groups

Summer	For each Proxy Generator Bus
HB07–10	IPD-1
HB11–14	IPD-2
HB15–18	IPD-3
HB19–22	IPD-4
Weekend/ Holiday (HB07–22)	IPD-5
Night (HB23–06)	IPD-6
Winter	
HB07–10	IPD-7

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HB11–14	IPD-8
HB15–18	IPD-9
HB19–22	IPD-10
Weekend/ Holiday (HB07–22)	IPD-11
Night (HB23–06)	IPD-12
<b>Rest-of-Year</b>	
HB07–10	IPD-13
HB11–14	IPD-14
HB15–18	IPD-15
HB19–22	IPD-16
Weekend/ Holiday (HB07–22)	IPD-17
Night (HB23–06)	IPD-18

Where:

Summer	=	May, June, July, and August
Winter	=	December, January, and February
Rest-of-Year	=	March, April, September, October, and November
HB07–10	=	weekday hours beginning 07:00–10:00
HB11–14	=	weekday hours beginning 11:00–14:00
HB15–18	=	weekday hours beginning 15:00–18:00
HB19–22	=	weekday hours beginning 19:00– 22:00
Weekend/Holiday	=	weekend and holiday hours beginning 07:00–22:00
Night	=	all hours beginning 23:00– 06:00

### Export Price Differential (EPD) Groups

<b>Summer</b>	<b>For each Proxy Generator Bus</b>
HB07–10	EPD-1
HB11–14	EPD-2
HB15–18	EPD-3
HB19–22	EPD-4
Weekend/ Holiday (HB07–22)	EPD-5
Night (HB23–06)	EPD-6



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<b>Winter</b>	
HB07–10	EPD-7
HB11–14	EPD-8
HB15–18	EPD-9
HB19–22	EPD-10
Weekend/ Holiday (HB07–22)	EPD-11
Night (HB23–06)	EPD-12
<b>Rest-of-Year</b>	
HB07–10	EPD-13
HB11–14	EPD-14
HB15–18	EPD-15
HB19–22	EPD-16
Weekend/ Holiday (HB07–22)	EPD-17
Night (HB23–06)	EPD-18

Where:

Summer	=	May, June, July, and August
Winter	=	December, January, and February
Rest-of-Year	=	March, April, September, October, and November
HB07–10	=	weekday hours beginning 07:00–10:00
HB11–14	=	weekday hours beginning 11:00–14:00
HB15–18	=	weekday hours beginning 15:00–18:00
HB19–22	=	weekday hours beginning 19:00– 22:00
Weekend/Holiday	=	weekend and holiday hours beginning 07:00–22:00
Night	=	all hours beginning 23:00– 06:00

#### 26.4.2.3 UCAP Component

The UCAP Component shall be equal to the total of all amounts then-owed (billed and unbilled) for UCAP purchased in the ISO-administered markets.

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#### **26.4.2.4 TCC Component**

The TCC Component shall be equal to the greater of either (a) the amount calculated in accordance with Section 26.4.2.4.1 (Auction TCC Holding Requirement) or Section 26.4.2.4.2 (Fixed Price TCC Holding Requirement), as appropriate, or (b) Section 26.4.2.4.3 (Mark-to-Market Calculation) below; *provided however*, that upon initial award of a TCC until the ISO receives payment for the TCC (or payment for the first year of a two-year TCC), the ISO will hold the greater of the payment obligation for the TCC or the credit requirement for the TCC calculated in accordance with this Section 26.4.2.4.

##### **26.4.2.4.1 Auction TCC Holding Requirement**

This Section 26.4.2.4.1 applies to TCCs awarded in the Centralized TCC Auction and Balance-of-Period Auction.

The credit requirement pursuant to this Section 26.4.2.4.1 shall equal the sum of the amounts calculated in accordance with the appropriate per TCC term-based formulas listed below. The ISO will not impose a credit requirement on TCCs that have been sold by a Market Participant in the Centralized TCC Auction or Balance-of-Period Auction.

##### **26.4.2.4.1.1 Two-Year TCCs:**

- (1) upon initial award of a two-year TCC until completion of the final round of the current two-year Sub-Auction, the sum of the first year and second year amounts, which will be calculated as follows:

###### First Year:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below



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where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the one-year Sub-Auction in the prior Capability Period Centralized TCC Auction with the same POI and POW combination as the two-year TCC.

Second Year:

$$+1.909\sqrt{e^{10.9729 + .6514(\ln(|P_{ijt}| + e)) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

$P_{ijt}$  = market clearing price of that two-year TCC minus the market clearing price of a one-year TCC in the final round of the one-year Sub-Auction in the prior Capability Period Centralized TCC Auction with the same POI and POW combination as the two-year TCC

- (2) upon completion of the final round of the current two-year Sub-Auction until completion of the final round of the current one-year Sub-Auction, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the one-year Sub-Auction in the prior Capability Period Centralized TCC Auction with the same POI and POW combination as the two-year TCC

Second Year:

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$$+1.909\sqrt{e^{10.9729 + .6514(\ln(|P_{ijt}| + e)) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

$P_{ijt}$  = market clearing price of a two-year TCC in the final round of the current two-year Sub-Auction with the same POI and POW combination as the two-year TCC minus the market clearing price of a one-year TCC in the final round of the one-year Sub-Auction in the prior Capability Period Centralized TCC Auction with the same POI and POW combination as the two-year TCC

- (3) upon completion of the final round of the current one-year Sub-Auction until completion of the Balance-of-Period Auction for the first month of the two-year TCC, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the current one-year Sub-Auction with the same POI and POW combination as the two-year TCC

Second Year:

$$+1.909\sqrt{e^{10.9729 + .6514(\ln(|P_{ijt}| + e)) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

$P_{ijt}$  = market clearing price of a two-year TCC in the final round of the current two-year Sub-Auction with the same POI and POW combination as the two-year TCC minus the market clearing price of a one-year TCC in the final round of the current one-year Sub-

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Auction with the same POI and POW combination as the two-year TCC

- (4) upon completion of the Balance-of-Period Auction for the first month of the two-year TCC until completion of the final round of the six-month Sub-Auction in the next Centralized TCC Auction, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formulas set forth in Section 26.4.2.4.1.6 below

Second Year:

$$+1.909\sqrt{e^{10.9729 + .6514\left(\ln(|P_{ijt}| + e)\right) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

$P_{ijt}$  = market clearing price of a two-year TCC in the final round of the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC minus the market clearing price of a one-year TCC in the final round of the one-year Sub-Auction that directly followed the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC

- (5) upon completion of the final round of the six-month Sub-Auction for the final six months of the first year of the two-year TCC until completion of the Balance-of-Period Auction immediately preceding the final six months of the first year of the two-year TCC, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

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the amount calculated in accordance with the six-month TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a six-month TCC in the final round of the six-month Sub-Auction with the same POI and POW combination as the one-year TCC

Second Year:

$$+1.909\sqrt{e^{10.9729 + .6514\left(\ln(|P_{ijt}| + e)\right) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

$P_{ijt}$  = market clearing price of a two-year TCC in the final round of the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC minus the market clearing price of a one-year TCC in the final round of the one-year Sub-Auction that directly followed the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC

- (6) upon completion of the Balance-of-Period Auction immediately preceding the final six months of the first year of the two-year TCC until ISO receipt of payment for the second year of the two-year TCC, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the appropriate Balance-of-Period TCC Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

Second Year:

$$+1.909\sqrt{e^{10.9729 + .6514\left(\ln(|P_{ijt}| + e)\right) + .6633 * Zone J + 1.1607 * Zone K}}$$

where:

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$P_{ijt}$  = market clearing price of a two-year TCC in the final round of the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC minus the market clearing price of a one-year TCC in the final round of the one-year Sub-Auction that directly followed the two-year Sub-Auction in which the TCC was purchased with the same POI and POW combination as the two-year TCC

- (7) upon ISO receipt of payment for the second year of the two-year TCC until completion of the final round of the one-year Sub-Auction in the next Centralized TCC Auction, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

Second Year:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the one-year Sub-Auction in the prior equivalent Capability Period Centralized TCC Auction with the same POI and POW combination as the two-year TCC

- (8) upon completion of the final round of the one-year Sub-Auction for the second year of the two-year TCC until completion of the Balance-of-Period Auction for the first month of the second year of the two-year TCC, the sum of the first year and second year amounts, which will be calculated as follows::

First Year:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

Second Year:

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the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the most recently completed one-year Sub-Auction with the same POI and POW combination as the two-year TCC

- (9) upon completion of the Balance-of-Period Auction for the first month of the second year of the two-year TCC until completion of the final round of the six-month Sub-Auction in the next Centralized TCC Auction, the sum of the first year and second year amounts, which will be calculated as follows:

First Year:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

Second Year:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

- (10) upon completion of the final round of the six-month Sub-Auction for the final six months of the two-year TCC until completion of the Balance-of-Period Auction immediately preceding the final six months of the two-year TCC:

the amount calculated in accordance with the six-month TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a six-month TCC in the final round of the most recently completed six-month Sub-Auction with the same POI and POW combination as the two-year TCC

- (11) upon completion of the Balance-of-Period Auction for the first month of the final six months of a two-year TCC:

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the amount calculated in accordance with the Balance-of-Period TCC formulas set forth in Section 26.4.2.4.1.5 below

#### **26.4.2.4.1.2 One-Year TCCs:**

- (1) upon initial award of a one-year TCC until completion of the final round of the current one-year Sub-Auction:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

- (2) upon completion of the final round of the current one-year Sub-Auction until completion of the Balance-of-Period Auction for the first month of the one-year TCC:

the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a one-year TCC in the final round of the current one-year Sub-Auction with the same POI and POW combination as the one-year TCC

- (3) upon completion of the Balance-of-Period Auction for the first month of the one-year TCC until completion of the final round of the six month Sub-Auction in the next Centralized TCC Auction:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

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- (4) upon completion of the final round of the six-month Sub-Auction for the final six months of a one-year TCC until completion of the Balance-of-Period Auction immediately preceding the final six months of a one-year TCC:

the amount calculated in accordance with the six-month TCC formula set forth in Section 26.4.2.4.1.5 below

where:

$P_{ijt}$  = market clearing price of a six-month TCC in the final round of the most recently completed six-month Sub-Auction with the same POI and POW combination as the one-year TCC

- (5) upon completion of the Balance-of-Period Auction for the first month of the final six months of a one-year TCC:

the amount calculated in accordance with the appropriate Balance-of-Period Auction holding requirement formula set forth in Section 26.4.2.4.1.6 below

#### **26.4.2.4.1.3 Six-Month TCCs:**

- (1) upon initial award of a six-month TCC until completion of the final round of the current six-month Sub-Auction:

the amount calculated in accordance with the six-month TCC formula set forth in Section 26.4.2.4.1.5 below

- (2) upon completion of the final round of the current six-month Sub-Auction until completion of the Balance-of-Period Auction for the first month of a six-month TCC:

the amount calculated in accordance with the six-month TCC formula set forth in Section 26.4.2.4.1.5 below

where:



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$P_{ijt}$  = market clearing price of a six-month TCC in the final round of the current six-month Sub-Auction with the same POI and POW combination as the one-year TCC

- (3) upon completion of the Balance-of-Period Auction for the first month of a six-month TCC:

the amount calculated in accordance with the Balance-of-Period Auction formula set forth in Section 26.4.2.4.1.6.1 below

#### **26.4.2.4.1.4 One-Month TCCs:**

upon initial award of a one-month TCC:

the amount calculated in accordance with the Balance-of-Period TCC Auction holding requirement formula set forth in Section 26.4.2.4.1.6.1 below

#### **26.4.2.4.1.5 Centralized TCC Auction – Holding Requirement Formulas:**

**for one-year TCCs, representing a 5% probability curve:**

$$+1.909\sqrt{e^{10.9729 + .6514(\ln(|P_{ijt}| + e)) + .6633 * Zone J + 1.1607 * Zone K}} - 1 P_{ijt}$$

**for six-month TCCs, representing a 3% probability curve:**

$$+2.565\sqrt{e^{11.6866 + .4749(\ln(|P_{ijt}| + e)) + .4856 * Zone J + .8498 * Zone K - .0373 Summer}} - 1 P_{ijt}$$

where:

$P_{ijt}$  = market clearing price of i to j TCC in round t of the auction in which the TCC was purchased;

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Zone J = 1 if TCC sources or sinks but not both in Zone J, zero otherwise;

Zone K = 1 if TCC sources or sinks but not both in Zone K and does not source or sink in Zone J, 0 otherwise;

Summer = 1 for six-month TCCs sold in the spring auction, 0 otherwise; and

Further, when calculating “Pijt” in Section 26.4.2.4.1, in the event there is no market clearing price for a two-year, one-year, or six-month TCC in the appropriate prior Capability Period Centralized TCC Auction with the same POI and POW combination as the awarded two-year, one-year, or six-month TCC, as appropriate, then the market clearing price shall equal a proxy price, assigned by the ISO, for a TCC with like characteristics.

Further, the NYISO may adjust any of the Zone K multipliers in Section 26.4.2.4.1 if, for TCCs of the same duration, the percentage ratio between collateral and congestion rents for Zone K TCCs deviates from the percentage ratio for Zone J TCCs by more than ten percent (10.0%).

#### **26.4.2.4.1.6 Balance-of-Period Auction – Holding Requirement Formulas:**

During the Balance-of-Period Auction, a TCC awarded in the Centralized TCC Auction (or the remaining segments of a TCC awarded in a prior Centralized TCC Auction) is segmented, as appropriate, into (i) a monthly segment, corresponding to the months within the current Capability Period, (ii) a future six-month segment, corresponding to the next Capability Period, and (iii) a one-year segment, corresponding to the next Capability Year, such that the sum of segments (i), (ii), and (iii) covers the entire remaining duration of the TCC. The credit holding requirement for the monthly segments and the future six-month segment are calculated in accordance with the formulas below.

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#### 26.4.2.4.1.6.1 Monthly Segment

**Monthly Segment (\$)** = [(Monthly Margin (\$) × Monthly Index Ratio × Monthly Factor) – TCC Price (\$)] × MWs

*where:*

**Monthly Margin** is calculated based on a methodology approved by Market Participants and posted to the ISO's website

**Monthly Index Ratio** as determined from time to time by the ISO based on historical data and a methodology approved by Market Participants and posted to the ISO's website

**Monthly Factor** as determined from time to time by the ISO based on historical data and a methodology approved by Market Participants and posted to the ISO's website

**TCC Price** is the market clearing price for the respective Capability Period month in the most recent Balance-of-Period Auction

**MWs** is the number of awarded TCC MWs

#### 26.4.2.4.1.6.2 Future Six-Month Segment

**Future Six-Month Segment (\$)** = (Six-Month Margin (\$) – TCC Price (\$)) × MWs

*where:*

**Six-Month Margin** is calculated based on a methodology approved by Market Participants and posted on the ISO's website

**TCC Price** is the market clearing price, using the same POI/POW combination, resulting from the

(1) Market clearing price from the final round of the most recent one-year TCC Sub-Auction, less the

(2) Market clearing price from the second round of the most recent six-month TCC Sub-Auction

**MWs** is the number of awarded TCC MWs

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#### 26.4.2.4.2 Fixed Price TCC Holding Requirement:

Upon award of a Fixed Price TCC, and for the duration of the Fixed Price TCC, the credit holding requirement will equal the amount calculated in accordance with the one-year TCC formula set forth in Section 26.4.2.1.5; provided, however, the market clearing price ( $P_{ijt}$ ) shall be replaced by the fixed price associated with that Fixed Price TCC, as determined in accordance with, as appropriate, OATT Section 19.2.1 or OATT Section 19.2.2.

#### 26.4.2.4.3 Mark-to-Market Calculation

The projected amount of the Primary Holder's payment obligation to the NYISO, if any, considering the net mark-to-market value of all TCCs in the Primary Holder's portfolio, as defined for these purposes, according to the formula below:

$$\sum_{n \in N} \left\{ \frac{NAP_n}{90} * RD_n \right\} + \sum_{n \in N} ACR_n$$

where:

NAP = the net amount of Congestion Rents between the POI and POW composing each  $TCC_n$  during the previous ninety days

RD = the remaining number of days in the life of  $TCC_n$ ; *provided, however*, that in the case of Grandfathered TCCs, RD shall equal the remaining number of days in the life of the longest duration TCC sold in an ISO-administered auction then outstanding;

N = the set of TCCs held by the Primary Holder; and

ACR = the net amount owed to the ISO for Congestion Rents between the POI and POW composing each  $TCC_n$ .

#### 26.4.2.5 WTSC Component

The WTSC Component shall be equal to the greater of either:

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$$\frac{\text{Greatest Amount Owed for WTSC During Any Single Month in the Prior Equivalent Capability Period}}{\text{Days in Month}} * 50$$

- or -

$$\frac{\text{Total Charges Incurred for WTSC Based Upon the Most Recent Monthly Data Provided by the Transmission Owner}}{\text{Days in Month}} * 50$$

#### 26.4.2.6 Virtual Transaction Component

The Virtual Transaction Component shall be equal to the sum of the Customer's

(i) Virtual Supply credit requirement ("VSCR") for all outstanding Virtual Supply Bids, plus (ii) Virtual Load credit requirement ("VLCR") for all outstanding Virtual Load Bids, plus (iii) net amount owed to the ISO for settled Virtual Transactions.

Where:

$$\text{VSCR} = \sum(\text{VSG}_{\text{MWh}} * \text{VSG}_{\text{CS}})$$

$$\text{VLCR} = \sum(\text{VLG}_{\text{MWh}} * \text{VLG}_{\text{CS}})$$

Where:

$\text{VSG}_{\text{MWh}}$  = the total quantity of MWhs of Virtual Supply that a Customer Bids for all Virtual Supply positions in the Virtual Supply group

$\text{VSG}_{\text{CS}}$  = the amount of credit support required in \$/MWh for the Virtual Supply group

$\text{VLG}_{\text{MWh}}$  = the total quantity of MWhs of Virtual Load that a Customer Bids for all Virtual Load positions in the Virtual Load group

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$VLG_{CS}$  = the amount of credit support required in \$/MWh for the Virtual Load group

The ISO will categorize each Virtual Supply Bid into one of the 72 Virtual Supply groups set forth in the Virtual Supply chart below, as appropriate, based upon the season, Load Zone, and time-of-day of the Virtual Supply Bid. The amount of credit support required in \$/MWh for a Virtual Transaction in a particular Virtual Supply group shall equal the price differential between the Energy price in the Day-Ahead Market and the Energy price in the Real-Time Market, at the 97<sup>th</sup> percentile, based upon all possible Virtual Supply positions in the Virtual Supply group for the period of time from April 1, 2005, through the end of the preceding calendar month.

The ISO will categorize each Virtual Load Bid into one of the 30 Virtual Load groups set forth in the Virtual Load chart below, as appropriate, based upon the season, Load Zone, and time-of-day of the Virtual Load Bid. The amount of credit support required in \$/MWh for a Virtual Transaction in a particular Virtual Load group shall equal the price differential between the Energy price in the Day-Ahead Market and the Energy price in the Real-Time Market, at the 97<sup>th</sup> percentile, based upon all possible Virtual Load positions in the Virtual Load group for the period of time from April 1, 2005, through the end of the preceding calendar month.

If a Customer submits Bids for both Virtual Load and Virtual Supply for the same day, hour, and Load Zone, then for those Bids, until such time as those Bids have been evaluated by SCUC, only the greater of the Customer's (i) VLCR for the total MWhs Bid for Virtual Load, or (ii) VSCR for the total MWhs Bid for Virtual Supply will be included when calculating the Customer's Virtual Transaction Component. After evaluation of those Bids by SCUC, then only the credit requirement for the net position of the accepted Bids (in MWhs of Virtual Load or

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Virtual Supply) will be included when calculating the Customer's Virtual Transaction Component.

#### Virtual Supply Groups

<b>Summer</b>	<b>Load Zones A–F</b>	<b>Load Zones G–I</b>	<b>Load Zone J</b>	<b>Load Zone K</b>
HB07–10	VSG-1	VSG-7	VSG-13	VSG-19
HB11–14	VSG-2	VSG-8	VSG-14	VSG-20
HB15–18	VSG-3	VSG-9	VSG-15	VSG-21
HB19–22	VSG-4	VSG-10	VSG-16	VSG-22
Weekend/ Holiday (HB07–22)	VSG-5	VSG-11	VSG-17	VSG-23
Night (HB23–06)	VSG-6	VSG-12	VSG-18	VSG-24
<b>Winter</b>				
HB07–10	VSG-25	VSG-31	VSG-37	VSG-43
HB11–14	VSG-26	VSG-32	VSG-38	VSG-44
HB15–18	VSG-27	VSG-33	VSG-39	VSG-45
HB19–22	VSG-28	VSG-34	VSG-40	VSG-46
Weekend/ Holiday (HB07–22)	VSG-29	VSG-35	VSG-41	VSG-47
Night (HB23–06)	VSG-30	VSG-36	VSG-42	VSG-48
<b>Rest-of-Year</b>				
HB07–10	VSG-49	VSG-55	VSG-61	VSG-67
HB11–14	VSG-50	VSG-56	VSG-62	VSG-68
HB15–18	VSG-51	VSG-57	VSG-63	VSG-69
HB19–22	VSG-52	VSG-58	VSG-64	VSG-70
Weekend/ Holiday (HB07–22)	VSG-53	VSG-59	VSG-65	VSG-71
Night (HB23–06)	VSG-54	VSG-60	VSG-66	VSG-72

Where:

Summer = May, June, July, and August

Winter = December, January, and February

Rest-of-Year = March, April, September, October, and November

HB07–10 = weekday hours beginning 07:00–10:00

HB11–14 = weekday hours beginning 11:00–14:00



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HB15–18	=	weekday hours beginning 15:00–18:00
HB19–22	=	weekday hours beginning 19:00– 22:00
Weekend/Holiday	=	weekend and holiday hours beginning 07:00–22:00
Night	=	all hours beginning 23:00– 06:00

#### Virtual Load Groups

<b>Summer</b>	<b>Load Zones A–F</b>	<b>Load Zones G–I</b>	<b>Load Zone J</b>	<b>Load Zone K</b>
HB07–10	VLG-1	VLG-4	VLG-8	VLG-12
HB11–14	VLG-2	VLG-5	VLG-9	VLG-13
HB15–18	VLG-2	VLG-6	VLG-10	VLG-14
HB19–22	VLG-1	VLG-4	VLG-8	VLG-15
Weekend/ Holiday (HB07–22)	VLG-3	VLG-4	VLG-8	VLG-16
Night (HB23–06)	VLG-1	VLG-7	VLG-11	VLG-12
<b>Winter</b>				
HB07–10	VLG-17	VLG-19	VLG-21	VLG-23
HB11–14	VLG-17	VLG-20	VLG-21	VLG-23
HB15–18	VLG-18	VLG-19	VLG-22	VLG-24
HB19–22	VLG-17	VLG-20	VLG-21	VLG-24
Weekend/ Holiday (HB07–22)	VLG-17	VLG-20	VLG-21	VLG-23
Night (HB23–06)	VLG-17	VLG-20	VLG-21	VLG-23
<b>Rest-of-Year</b>				
HB07–10	VLG-25	VLG-26	VLG-27	VLG-29
HB11–14	VLG-25	VLG-26	VLG-28	VLG-29
HB15–18	VLG-25	VLG-26	VLG-28	VLG-30
HB19–22	VLG-25	VLG-26	VLG-27	VLG-30
Weekend/ Holiday (HB07–22)	VLG-25	VLG-26	VLG-27	VLG-30
Night (HB23–06)	VLG-25	VLG-26	VLG-27	VLG-29

Where:

Summer	=	May, June, July, and August
Winter	=	December, January, and February
Rest-of-Year	=	March, April, September, October, and November



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HB07–10	=	weekday hours beginning 07:00–10:00
HB11–14	=	weekday hours beginning 11:00–14:00
HB15–18	=	weekday hours beginning 15:00–18:00
HB19–22	=	weekday hours beginning 19:00– 22:00
Weekend/Holiday	=	weekend and holiday hours beginning 07:00–22:00
Night	=	all hours beginning 23:00– 06:00

#### ~~26.4.2.7—DADRP Component~~

~~The DADRP Component shall be equal to the product of: (i) the Demand Reduction Provider's monthly average of MWh of accepted Demand Reduction Bids during the prior summer Capability Period or, where the Demand Reduction Provider does not have a history of accepted Demand Reduction bids, a projected monthly average of the Demand Reduction Provider's accepted Demand Reduction bids; (ii) the average Day Ahead LBMP at the NYISO Reference Bus during the prior summer Capability Period; (iii) twenty percent (20%); and (iv) a factor of four (4). The ISO shall adjust the amount of Unsecured Credit and/or collateral that a Demand Reduction Provider is required to provide whenever the DADRP Component increases or decreases by ten percent (10%) or more.~~

#### ~~26.4.2.8—DSASP Component~~

~~The DSASP Component is calculated every two months based on the Demand Side Resource's Operating Capacity available for the scheduling of such services, the delta between the Day Ahead and hourly market clearing prices for such products in the like two month period of the previous year, and the location of the Demand Side Resource. Resources located East of Central East shall pay the Eastern reserves credit support requirement and Resources located~~

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~~West of Central East shall pay the Western reserves credit support requirement. The DSASP Component shall be equal to:-~~

- ~~(a) — For Demand Side Resources eligible to offer only Operating Reserves, the product of (i) the maximum hourly Operating Capacity (MW) for which the Demand Side Resource may be scheduled to provide Operating Reserves, (ii) the amount of Eastern or Western reserves credit support, as appropriate, in \$/MW per day, and (iii) three (3) days.~~

~~Where:~~

~~The amount of Eastern reserves credit support (\$/MW/day) for each two-month period = Eastern Price Differential for the same two-month period in the previous year \* the higher of two (2) or the maximum number of daily Reserve Activations for the same two-month period in the previous year~~

~~The amount of Western reserves credit support (\$/MW/day) for each two-month period = Western Price Differential for the same two-month period in the previous year \* the higher of two (2) or the maximum number of daily Reserve Activations for the same two-month period in the previous year~~

~~Two-month periods: = January and February  
March and April  
May and June  
July and August  
September and October  
November and December~~

~~$MCP_{SRh}$  = Hourly, time-weighted Market Clearing Price for Spinning Reserves~~

~~Eastern Price Differential = The hourly differential at the 97<sup>th</sup> percentile of all hourly differentials between the Day Ahead and Real Time  $MCP_{SRh}$  for Eastern Spinning Reserves for hours in the two-month period of the previous year when the Real Time  $MCP_{SRh}$  for Eastern~~

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<del>Western Price Differential</del>	<del>=</del>	<del>Spinning Reserves exceeded the Day Ahead MCPSRh for Eastern Spinning Reserves</del>  <del>The hourly differential at the 97<sup>th</sup> percentile of all hourly differentials between the Day Ahead and Real Time MCPsSRh for Western Spinning Reserves for hours in the two month period of the previous year when the Real Time MCPSRh for Western Spinning Reserves exceeded the Day Ahead MCPSRh for Western Spinning Reserves</del>
<del>Reserve Activations</del>	<del>=</del>	<del>The number of reserve activations at the 97th percentile of daily reserve activations for days in each two month period of the previous year that had reserve activations.</del>

~~(b) — For Demand Side Resources eligible to offer only Regulation Service, or Operating Reserves and Regulation Service, the product of (i) the maximum hourly Operating Capacity (MW) for which the Demand Side Resource may be scheduled to provide Regulation Service and Operating Reserves, (ii) the amount of regulation credit support, as appropriate, in \$/MW per day, and (iii) three (3) days.~~

~~Where:~~

<del>The amount of regulation credit support (\$/MW/day) for each two month period</del>	<del>=</del>	<del>Price Differential for the same two month period in the previous year * 24 hours</del>
<del>Two month periods:</del>	<del>=</del>	<del>January and February March and April May and June July and August September and October November and December</del>
<del>MCP<sub>RegH</sub></del>	<del>=</del>	<del>Hourly, time weighted Market Clearing Price for Regulation Services</del>

#### 26.4.2.9 Projected True-Up Exposure Component

$$PTE = \left[ \sum_{N4} (4 \text{ month settlement} - \text{associated initial settlement}) \right] + \left[ \sum_{N8} (\text{Final bill close-out settlement} - \text{associated 4 month settlement}) \right]$$

PTE	=	The amount of secured credit support required for the Projected True-Up Exposure Component
N4	=	Each month in the most recent four-month period with a 4 month settlement
N8	=	Each month in the most recent eight-month period with a final bill close-out settlement

#### **26.4.2.10 Former RMR Generator Component**

The Former RMR Generator Component shall apply to any Customer that is the financially responsible party under the ISO Tariffs for a former RMR Generator or former Interim Service Provider that is subject to a Monthly Repayment Obligation. The Former RMR Generator Component will apply until either (a) the Monthly Repayment Obligation associated with the former RMR Generator or former Interim Service Provider is paid in full, or (b) the former RMR Generator or former Interim Service Provider is not subject to a Monthly Repayment Obligation. Customers subject to the Former RMR Generator Component shall be required to provide collateral to satisfy the requirement.

The Former RMR Generator Component shall be calculated as follows:

$$\sum_{G \in S} MRO_G \times Term_G$$

$S$  = the set of former RMR Generators and former Interim Service Providers for which Customer is the financially responsible party under the ISO Tariffs

$G$  = a former RMR Generator or former Interim Service Provider in set  $S$

$MRO_G$  = the Monthly Repayment Obligation (as defined in Section 15.8.7 of Rate Schedule 8 to the Services Tariff) for Generator  $G$

$Term_G$  = the lesser of 8 or the number of months remaining in the repayment term that the ISO determines in accordance with Rate Schedule 8 to the Services Tariff for Generator  $G$

#### **26.4.3 Calculation of Bidding Requirement**

The Bidding Requirement shall be an amount equal to the sum of:

- (i) the amount of bidding authorization that the Customer has requested for use in or during, as appropriate, an upcoming ISO-administered TCC auction, which shall

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at least cover the sum of all positive bids to purchase TCCs, plus the absolute value of the sum of all negative offers to sell TCCs; *provided, however*, that the amount of credit required for each TCC that the Customer bids to purchase, whether positive, negative, or zero shall not be less than (a) \$3,000 per MW for two-year TCCs, (b) \$1,500 per MW for one-year TCCs, (c) \$2,000 per MW for six-month TCCs, (d) \$1,800 per MW for five-month TCCs, (e) \$1,500 per MW for four-month TCCs, (f) \$1,200 per MW for three-month TCCs, (g) \$900 per MW for two-month TCCs, and (h) \$600 per MW for one-month TCCs;

- (ii) the approximate amount that the Customer may owe following an upcoming TCC auction as a result of converting expired ETAs into Historic Fixed Price TCCs pursuant to Section 19.2.1 of Attachment M to the OATT, which shall be calculated in accordance with the provisions of Section 19.2.1 regarding the purchase of TCCs with a duration of ten years;
- (iii) the amount of bidding authorization that the Customer has requested for use in an upcoming ISO-administered ICAP auction; and
- (iv) five (5) days prior to any ICAP Spot Market Auction, the amount that the Customer may be required to pay for UCAP in the auction, calculated as follows:

$$\sum_{L \in S} \left[ (ICPM_L * 1000 * Deficiency_L) + (ICPM_L * 1000 * (ZDOMW_L * -1)) + \left( ICPM_L * 1000 * \left( \frac{ZCP_L - 1}{2} \right) * RQT_L \right) \right]$$

Where:

$S$  equals a set containing the following locations: each Locality and Rest of State,

$L$  equals a location in the set  $S$ ,

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$ICPM_L$	equals the lesser of $UBRP_L$ or $LM_L$ ,
$UBRP_L$	equals the UCAP based reference point (in \$/kW-Month) for location $L$ , as determined on the ICAP Demand Curve for that location (or for NYCA, if $L$ is Rest of State) for the applicable Obligation Procurement Period,
$LM_L$	equals (1) for any Locality $L$ that is contained within another Locality $X$ , the greater of $CPM_L$ or $CPM_X$ , or (2) for any other Locality or Rest of State, $CPM_L$ ,
$CPM_L$	equals for location $L$ , $(1 + Margin_L) * MCP_L$ ,
$CPM_X$	equals for location $X$ , $(1 + Margin_X) * MCP_X$ ,
$Margin_L$	equals 25% if location $L$ is New York City and 100% if location $L$ is G-J Locality, Long Island or Rest of State,
$MCP_L$	equals the Market-Clearing Price for location $L$ in the most recent Monthly Auction that established such a price for the month covered by the ICAP Spot Market Auction, measured in dollars per kilowatt-month,
$Deficiency_L$	equals the number of megawatts of Unforced Capacity that are to be procured in location $L$ on behalf of that Customer in the ICAP Spot Market Auction in order to cover any deficiency for that Customer that exists in that location after the certification deadline for that ICAP Spot Market Auction less any deficiency calculated for that Customer for any Localities contained within location $L$ , such value not to be less than zero,
$ZDOMW_L$	equals the number of megawatts of unsold Unforced Capacity in location $L$ that the Customer committed as zero dollar offered megawatts for that ICAP Spot Market Auction,
$ZCP_L$	equals the percentage determined in accordance with Services Tariff Section 5.14.1.2 for the applicable ICAP Demand Curves as established at the \$0.00 point for the appropriate Capability Year, and
$RQT_L$	equals (1) if $L$ is New York City or Long Island, that Customer's share of the Locational Minimum Unforced Capacity Requirement for location $L$ or (2) if $L$ is G-J Locality, that Customer's share of the Locational Minimum Unforced Capacity Requirement for the G-J Locality that remains after reducing this amount by its share of the Locational Minimum Unforced Capacity Requirements for New York City or, (3) if $L$ is Rest of State, that Customer's share of the NYCA Minimum Unforced Capacity Requirement that remains after reducing this amount by (a) its share of the Locational Minimum Unforced Capacity Requirements for New York City and Long Island and (b) that Customer's share of the Locational Minimum

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Unforced Capacity Requirement for the G-J Locality remaining after accounting for New York City, as calculated in (2) above; such value not to be less than zero.



## **26.5 Unsecured Credit**

A Customer may use Unsecured Credit to satisfy any part of its Operating Requirement or Bidding Requirement other than (i) any credit requirement for bidding on or holding TCCs, (ii) the Projected True-Up Exposure Component, (iii) the Former RMR Generator Component, or (iv) a withdrawing Customer's required collateral. Affiliate guarantees are considered a form of Unsecured Credit.

Upon written request of a Customer, the ISO shall determine the amount of Unsecured Credit to be granted to the Customer, if any, in accordance with the ISO's creditworthiness requirements. Upon a Customer's written request, the ISO will provide a written explanation for any changes in the amount of the Customer's Unsecured Credit.

### **26.5.1 Eligibility**

A Customer may be eligible to receive Unsecured Credit if the Customer meets the following criteria:

- (i) Creditworthiness
  - (a) is an Investment Grade Customer,
  - (b) is an Unrated Customer that is deemed an Investment Grade Customer pursuant to an Equivalency Rating, or
  - (c) provides an Affiliate guarantee in compliance with Section 26.5.4 of this Attachment K;

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(ii) Payment History

- (a) has actively participated in the ISO-Administered markets and paid when due all of its invoices during the immediately preceding six months, or
- (b) has actively participated in the markets of another independent system operator or regional transmission organization and has paid when due all of its invoices during the immediately preceding six months. Any Customer relying on its payment history in another market to fulfill the requirement of this Section 26.5.1(ii) must provide evidence satisfactory to the ISO of such payment history.

Notwithstanding the foregoing, a Customer otherwise eligible for Unsecured Credit that fails to respond to the ISO's request to update the Customer's list of Affiliates, within the time frame provided by Section 9.2 of the ISO Services Tariff, shall not be eligible for Unsecured Credit.

**26.5.2 Market Concentration Cap**

A Customer's Unsecured Credit shall not exceed fifty million dollars (\$50M) (the "Market Concentration Cap"). Moreover, the maximum amount of Unsecured Credit extended to a group of Customers that are Affiliates shall not exceed, in the aggregate, the Market Concentration Cap.

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#### **26.5.3 Determination of Unsecured Credit**

##### **26.5.3.1 Starting Point**

The starting point for determining the amount of Unsecured Credit to be granted to an Investment Grade Customer, except as provided otherwise in Section 26.5.3.6 of this Attachment K, shall be a percentage of its Tangible Net Worth, as indicated on the matrix contained in Table K-1, subject to the Market Concentration Cap.

##### **26.5.3.2 Adjustment to Starting Point**

The ISO shall conduct a Credit Assessment of the Customer and shall determine the amount of Unsecured Credit that it shall grant to the Customer by adjusting the Customer's starting point in accordance with the following table:

**Starting Point Adjustment**

<b>Score Bucket</b>	<b>Public Score Range</b>	<b>Private Score Range</b>	<b>Starting Point Adjustment</b>
1	0.00 – 0.33	0.00 – 0.31	0%
2	0.34 – 0.40	0.32 – 0.39	-20%
3	0.41 – 0.45	0.40 – 0.43	-50%
4	0.46 – 0.50	0.44 – 0.48	-80%
5	0.51+	0.49+	-100%

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**26.5.3.3 Adjustment to Unsecured Credit**

- (a) In the event of a change in a Customer's (1) Tangible Net Worth, and/or (2) agency rating, the ISO shall recalculate the Customer's starting point and Unsecured Credit amount in accordance with Sections 26.5.3.1 and 26.5.3.2 of this Attachment K.
- (b) The ISO may conduct a Credit Assessment of a Customer at any time and adjust the amount of Unsecured Credit granted to the Customer in accordance with the following table:

**Unsecured Credit Adjustment**

**Current Credit Assessment Score Bucket**

<b>Prior Credit Assessment Score Bucket</b>	<b>Score Bucket</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	1	0%	-20%	-50%	-80%	-100%
	2	25%	0%	-38%	-75%	-100%
	3	100%	60%	0%	-60%	-100%
	4	400%	300%	150%	0%	-100%
	5	N/A	N/A	N/A	N/A	N/A

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#### **26.5.3.4 Restoration of Unsecured Credit**

A Customer that is subject to a 100% reduction of Unsecured Credit shall not be eligible for Unsecured Credit again until the Customer demonstrates two consecutive quarters of financial performance that would otherwise have qualified the Customer for Unsecured Credit in accordance with Sections 26.5.3.1 and 26.5.3.2 of this Attachment K.

#### **26.5.3.5 Credit Assessment**

- (a) In performing a Credit Assessment, the ISO shall evaluate specified indicators of credit risk pertaining to a Customer, which indicators will vary depending on whether the Customer is categorized by the ISO as a private entity or a public entity. The ISO shall categorize a Customer as private or public, for Credit Assessment purposes, in accordance with the following criteria:

<b>Primary Criteria</b>	<b>Secondary Criteria</b>	<b>Credit Assessment Category</b>
Standalone public trading company	None	Public
Subsidiary of a public company with its parent company as guarantor	None	Public
Subsidiary of a public company	With assets greater than US\$10B	Public
Subsidiary of a public company	Contributes 50% or more of its parent company's revenues or accounts for 50% or more of its assets	Public

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Subsidiary of a public company	Contributes less than 50% of its parent company's revenues or represents less than 50% of its assets	Private
Does not satisfy the criteria listed above	None	Private

- (b) The ISO shall determine the Credit Assessment score for a Customer based upon the market and financial indicators and weightings, as appropriate, set forth below.

<b>Public Entity Indicators</b>	<b>Weight</b>
▪ Market Indicators	
• Absolute CDS Spread	21.3%
• Relative Stock Decline from 3 month high	4.3%
• Stock Return Volatility (3 month std. deviation)	12.7%
▪ Performance	
• Revenue/Market Cap	12.7%
• Retained Earnings/Assets	8.5%
▪ Debt Coverage	
• Total Debt/EBITDA	12.7%
▪ Leverage	
• Debt/(Total Debt + Equity)	8.5%
▪ Liquidity	
• Cash/Assets	4.3%

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- Qualitative Assessment 15.0%

<b>Private Entity Indicators</b>	<b>Weight</b>
----------------------------------	---------------

- |                           |       |
|---------------------------|-------|
| ▪ Performance             |       |
| • Return on Assets        | 17.5% |
| • Profit Margin           | 10.5% |
| ▪ Debt Coverage           |       |
| • Total Debt/EBITDA       | 17.5% |
| ▪ Leverage                |       |
| • Total Debt/Total Assets | 17.5% |
| ▪ Liquidity               |       |
| • Cash/Assets             | 7.0%  |
| ▪ Qualitative Assessment  | 30.0% |

(c) If one or more of the indicators listed above does not exist for a Customer, then the ISO shall, in its sole discretion, reallocate the weight attributed to that indicator either (1) to the remaining indicators proportionately, or (2) entirely to the qualitative assessment indicator.

(d) The qualitative areas evaluated shall include, but shall not be limited to, the following (as applicable): (1) Affiliate financial and market indicators, (2) ratemaking ability and legal right to fully recover end-user costs, (3) industry

characteristics, (4) risk policies and procedures, (5) management quality, (6) ability to access funding in difficult market conditions, and (7) historical relationship and payment history with the ISO. A Transmission Owner that can recover end-user costs pursuant to authority granted by the PSC will receive a qualitative assessment score of no worse than five.

#### **26.5.3.6 Public Power Entities**

The following additional provisions shall apply to the determination of a Customer's Unsecured Credit:

- (a) A Public Power Entity shall qualify for one million dollars (\$1M) in Unsecured Credit, without regard for its Tangible Net Worth or Credit Assessment. Municipal electric systems that operate through a joint action agency or a similar municipal affiliation agreement may aggregate their Unsecured Credit amounts of one million dollars (\$1M) per member such that the joint action agency will have an Unsecured Credit amount, subject to the Market Concentration Cap, equal to the total of the Unsecured Credit amounts of each individual member. Each such agency will qualify for such aggregated Unsecured Credit treatment subject to the ISO's review of the particular affiliation agreement and the ISO's review of documentation submitted by the agency to demonstrate that it has been formed under the pertinent sections of the New York State Municipal Law.



## **DRAFT – FOR DISCUSSION PURPOSES ONLY**

### **For discussion at April 2019 Management Committee Meeting**

- (b) In lieu of a one million dollar (\$1M) grant of Unsecured Credit, a Public Power Entity may request Unsecured Credit based on its Tangible Net Worth and Credit Assessment. In such case, the ISO will consider the Public Power Entity a private entity for Credit Assessment purposes.

#### **26.5.4 Affiliate Guarantees**

##### **26.5.4.1 Eligibility**

An Affiliate guarantor shall be subject to the ISO's financial assurance requirements as if the Affiliate guarantor were a Customer and shall be assigned a level of Unsecured Credit, if any.

##### **26.5.4.2 Use for Satisfaction of Minimum Capitalization Requirements**

A Customer may use an Affiliate guarantor's financial statements to satisfy the capitalization requirement set forth in Section 26.1.1(d) of this Attachment K if (i) no other Customer relies on the Affiliate guarantor's financial statements to satisfy the capitalization requirement, and (ii) the Customer provides an unlimited Affiliate guarantee that satisfies the requirements set forth in Section 26.5.4.3 of this Attachment K. If a Customer provides an Affiliate guarantee solely to satisfy its capitalization requirement, the Affiliate guarantor, notwithstanding Section 26.5.4.1 of this Attachment K, shall not be subject to the ISO financial assurance requirements.

## **DRAFT – FOR DISCUSSION PURPOSES ONLY**

### **For discussion at April 2019 Management Committee Meeting**

#### **26.5.4.3 Form of Affiliate Guarantee**

An Affiliate guarantee must be in a form acceptable to the ISO and issued by an Investment Grade U.S. or Canadian Affiliate. A Customer's failure to provide a source of collateral in an amount sufficient to (i) secure its obligations to the ISO and/or (ii) as applicable, secure its capitalization requirement pursuant to Section 26.1.1(d) of this Attachment K, fifty (50) days prior to the termination of an Affiliate guarantee, which source of collateral shall be guaranteed to remain in effect for a period of not less than one (1) year, shall be a condition of default enabling the ISO to immediately demand payment under the Affiliate guarantee in the amount required to meet Customer's ISO credit requirements, and/or, as applicable, the amount required to secure Customer's capitalization requirement.

#### **26.5.5 Requests for Changes, Appeals**

Requests for changes to the amount of a Customer's Unsecured Credit shall be made in writing to the ISO Credit Manager. Appeals of any decision regarding a Customer's Unsecured Credit shall be made in writing to the ISO's Chief Financial Officer and shall include all necessary supporting documentation. The Chief Financial Officer shall determine all appeals within ten (10) business days.

## **DRAFT – FOR DISCUSSION PURPOSES ONLY**

### **For discussion at April 2019 Management Committee Meeting**

#### **26.6 Collateral Requirements**

As security for the prompt payment of a Customer's obligations to the ISO arising under the Services Tariff or the OATT, including without limitation an obligation to (i) satisfy any credit requirement for bidding on or holding TCCs, and (ii) to the extent that its Operating Requirement and/or Bidding Requirement exceed(s) the total of its Unsecured Credit plus any posted collateral, Customer shall provide to the ISO collateral in an acceptable form in accordance with Section 26.6.1 hereof.

##### **26.6.1 Acceptable Collateral**

###### **26.6.1.1 Cash deposit**

A cash deposit shall be held in escrow by the ISO, with actual interest earned on the deposit accrued to the Customer's account.

###### **26.6.1.2 Letter of credit**

A letter of credit shall be in a form acceptable to the ISO and issued or guaranteed by an approved U.S. or Canadian commercial bank, or an approved U.S. or Canadian branch of a foreign bank, with a minimum "A" rating from Standard & Poor's, Fitch, Moody's, or Dominion. A Customer's failure to provide acceptable collateral in an amount sufficient to secure its obligations to the ISO fifty (50) days prior to the termination of a letter of credit, which collateral shall be guaranteed to remain in effect for a period of not less than one (1) year, shall be a condition of default enabling the ISO to immediately draw upon the full value of the letter of credit.

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### **For discussion at April 2019 Management Committee Meeting**

#### **26.6.1.3 Surety Bonds**

A surety bond shall be in a form acceptable to the ISO, payable immediately upon demand without prior demonstration of the validity of the demand, and issued by a U.S. Treasury-listed surety with a minimum “A” rating from A.M. Best. A Customer’s failure to provide acceptable collateral in an amount sufficient to secure its obligations to the ISO fifty (50) days prior to the termination of a surety bond, which collateral shall be guaranteed to remain in effect for a period of not less than one (1) year, shall be a condition of default enabling the ISO to immediately demand payment of the full value of the surety bond.

#### **26.6.1.4 Netting of Amounts Receivable**

A Customer may elect to treat as cash collateral the amount that the ISO determines will be owed to the Customer as of the day after the next regular weekly payment to the Customer and that will be payable to the Customer in the following regular weekly payment; *provided, however*, that (i) any such payment to the Customer may be adjusted by the ISO as necessary to correct for any error in this determination, and (ii) the Customer first enter into a security agreement with the ISO in a form acceptable to the ISO. At a minimum, the security agreement must grant to the ISO a continuing, first priority security interest in the Customer’s ISO receivables and authorize the ISO to file financing statements, as necessary, at Customer’s expense, to protect the ISO’s interest.

#### **26.6.3 Alternative Security Arrangements**

Alternative security arrangements substantially similar to the credit requirements set forth in this Attachment K may be made in exigent circumstances to protect the financial position of

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the ISO if proposed by the Customer and approved by the ISO.

**For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.7 MST Att K -Additional Financial Assurance Policies-ET

**26.7 Additional Financial Assurance Policies for External Transactions**

**26.7.1 ISO Monitoring**

The ISO shall monitor the External Transaction Bids submitted by a Customer. If the credit support required for any batch of External Transaction Bids submitted by a Customer exceeds the amount of the Customer's available credit support for External Transactions, then all of the Customer's External Transaction Bids in that batch of Bids shall be rejected by the ISO.

**26.7.2 Suspension**

If, at any time, the net amount owed to the ISO by a Customer as a result of External Transactions reaches fifty percent (50%) of the credit support provided by the Customer to support its External Transactions, then the ISO shall attempt to contact the Customer to request either payment or additional credit support in the amount then owed by the Customer as a result of its External Transactions.

If the day of the ISO's request stated above falls on a business day and the Customer fails to make payment or provide additional collateral as described above by 4:00 p.m. Eastern Time on the same day as the ISO's request, then the ISO may immediately suspend the Customer's authorization to engage in External Transactions until payment or provision of its required amount of credit support using Unsecured Credit and/or collateral.

If the day of the ISO's request stated above does not fall on a business day, then the ISO may issue a demand for credit support and immediately suspend the Customer's authorization to

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engage in External Transactions until the Customer makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.

If, at any time, the amount owed to the ISO by a Customer as a result of its External Transactions reaches one hundred percent (100%) of the credit support provided by the Customer to support its External Transactions, then the ISO may cancel any pending Day-Ahead Bids before they are accepted and may immediately suspend the Customer's authorization to engage in External Transactions until the Customer makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.

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NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.8 MST Att K Additional Financial Assurance Policies - TCC

**26.8 Additional Financial Assurance Policies for TCCs**

**26.8.1 Suspension**

If, at any time, the net amount owed by a Customer to the ISO for Congestion Rents reaches fifty percent (50%) of the collateral posted by the Customer to satisfy the TCC Component of its Operating Requirement then the ISO shall attempt to contact the Customer to request either payment or additional collateral in the net amount of the Congestion Rents then owed by the Customer.

If the Customer fails to make payment or provide additional collateral as described above by 4:00 p.m. Eastern Time on the same day as the ISO's request, then the ISO may cancel any pending Bids on TCCs and may immediately suspend the Customer's authorization to Bid on TCCs until the Customer makes payment or provides the required amount of collateral.



**For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.9 MST Att K Additional Financial Assurance Policies-Virtu

**26.9 Additional Financial Assurance Policies for Virtual Transactions**

**26.9.1 ISO Monitoring**

The ISO shall monitor the Virtual Transaction Bids submitted by a Customer. If the credit support required for any batch of Virtual Transaction Bids submitted by a Customer exceeds the amount of the Customer's available credit support for Virtual Transactions, then all of the Customer's Virtual Transaction Bids in that batch of Bids shall be rejected by the ISO.

**26.9.2 Suspension**

If, at any time, the net amount owed to the ISO by a Customer as a result of Virtual Transactions reaches fifty percent (50%) of the credit support provided by the Customer to support its Virtual Transactions, then the ISO shall attempt to contact the Customer to request either payment or additional credit support in the amount then owed by the Customer as a result of its Virtual Transactions.

If the day after the ISO's request stated above falls on a business day and the Customer fails to make payment or provide additional credit support as described above by 4:00 p.m. on that next business day, then the ISO may immediately suspend the Customer's authorization to engage in Virtual Transactions until payment or provision of its required amount of credit support using Unsecured Credit and/or collateral.

If the day after the ISO's request does not fall on a business day, then the ISO may issue a demand for credit support and immediately suspend the Customer's authorization to engage in Virtual Transactions until the Customer makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.

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If, at any time, the amount owed to the ISO by a Customer as a result of its Virtual Transactions reaches one hundred percent (100%) of the credit support provided by the Customer to support its Virtual Transactions, then the ISO may cancel any pending Day-Ahead Bids before they are accepted and may immediately suspend the Customer's authorization to engage in Virtual Transactions until the Customer makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.

**For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.10 MST K Additional Financial Assurance Policies-Deman

~~26.10 — Additional Financial Assurance Policies for Demand Side Resources Offering Ancillary Services~~

~~26.10.1 — Suspension~~

- ~~(i) — If, at any time, the amount owed to the ISO by a Demand Side Resource offering Ancillary Services as a result of its market activity reaches fifty percent (50%) of the credit support provided by the Demand Side Resource offering Ancillary Services to support its market transactions, the ISO shall attempt to contact the Demand Side Resource to request either payment or additional credit support in the amount then owed by the Demand Side Resource to support its market transactions.~~
- ~~(ii) — If the day after the ISO's request described above falls on a business day and the Demand Side Resource fails to make payment or provide additional credit support as described above by 4:00 p.m. on the day after the ISO's request described above, the ISO may immediately suspend the Demand Side Resource's authorization to engage in market transactions until payment or provision of its required amount of credit support using Unsecured Credit and/or collateral.~~
- ~~(iii) — If the day after the ISO's request does not fall on a business day, the ISO may issue a demand for credit support and immediately suspend the Demand Side Resource's authorization to engage in market transactions until the Demand Side Resource makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.~~

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NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.10 MST K Additional Financial Assurance Policies-Deman

~~(iv) — If, at any time, the amount owed to the ISO by a Demand Side Resource as a result of its market transactions reaches one hundred percent (100%) of the credit support provided by the Demand Side Resource to support its market transactions, the ISO may cancel any pending Day Ahead bids and may immediately suspend the Demand Side Resource's authorization to engage in market transactions until the Demand Side Resource makes payment or provides its required amount of credit support using Unsecured Credit and/or collateral.~~

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NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.11 MST Att K Addtl Fnnci Assrnc Plcs-Whole Trnsmssn Svc

**26.11 Additional Financial Assurance Policies for Wholesale Transmission Service Charges**

**26.11.1 Application of Security**

In the event a Transmission Owner declares a certain WTSC overdue and satisfies the requirements specified in Section 26.11.2 below, the NYISO will reimburse the Transmission Owner for part, or all, of the unpaid amount.

To the extent a Market Participant's Unsecured Credit does not satisfy the Market Participant's Operating Requirement, the NYISO will collect and hold collateral calculated pursuant to the WTSC Component of the Operating Requirement to secure payments owed by Customers to Transmission Owners. Any security held by the ISO for a Customer in excess of the amount collected pursuant to the WTSC Component of the Operating Requirement shall be available to secure WTSC only to the extent the ISO determines that such collateral will not be necessary to secure any payment obligations to the ISO, including true-up payments and other anticipated invoice adjustments. The ISO shall have access to any collateral collected pursuant to the WTSC Component of the Operating Requirement only to the extent that the ISO determines such collateral is not necessary to secure WTSC payment obligations to Transmission Owners.

**26.11.2 Prerequisites to NYISO Action**

The following conditions must be fully satisfied before the NYISO takes action to address a WTSC nonpayment:

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26.11.2.1 The WTSC payment must be at least ten (10) days overdue, as measured

from the due date on the invoice sent to the Customer by the Transmission

Owner;

26.11.2.2 The Transmission Owner must have issued a late notice and demand letter

to the Customer specifying both the amount and period by which the WTSC

payment is overdue;

26.11.2.3 The Transmission Owner must have made an additional, informal attempt

to collect the overdue WTSC payment from the Customer which may be, without

limitation, a telephone call or meeting with appropriate personnel (the method of

such additional informal attempt shall be at the Transmission Owner's discretion);

and

26.11.2.4 The Transmission Owner must provide to the ISO, by certified mail or

other verifiable delivery method, a copy of the initial invoice sent to the

Customer, a copy of the late notice and demand letter with proof of receipt by the

Customer, an indemnification of the ISO regarding the liabilities discussed in

Section 26.11.3 below, a request that the NYISO draw upon available collateral to

satisfy the default, and a sworn statement by an officer of the Transmission

Owner stating: (a) that the WTSC payment is due and owing, (b) the period by

which the WTSC payment is overdue, (c) a recitation of the Transmission

Owner's collection efforts (including the additional, informal attempt to collect

the debt).

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**26.11.3 NYISO Action**

On the first business day after the ISO has received the notice that satisfies the requirements listed in Section 26.11.2.4 above, the ISO: (i) shall send a final demand for payment of the WTSC to the Customer within two (2) business days; (ii) shall initiate a draw upon available collateral for the benefit of the affected Transmission Owner if the WTSC due is not paid within two (2) business days of the letter; and (iii) may begin termination proceedings in accordance with the NYISO tariffs.

**26.11.4 Transmission Owner Indemnification to the NYISO**

As a prerequisite for ISO action listed in Section 26.11.3 above, the Transmission Owner will indemnify and hold the ISO harmless against liability arising out of the use of security to satisfy a WTSC nonpayment, any proceeding to terminate service, or termination of service to a customer except to the extent the dispute arises out of the ISO's reporting to the Transmission Owner of whether the underlying wheel through, internal wheel or export transaction(s) actually occurred and the details of the transaction.

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### **For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.12 MST Att K Request for Additional Credit Support

#### **26.12 Request for Additional Credit Support**

If, at any time, the ISO requests additional credit support from a Customer to meet a shortfall, the Customer shall, within two (2) business days from the date of the request, or any shorter time period specified by the ISO or otherwise required by the ISO Tariffs, allocate Unsecured Credit and/or post collateral in an amount sufficient to cover the shortfall.



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### **For discussion at April 2019 Management Committee Meeting**

#### **26.13 Withdrawing Customer's Collateral**

Upon a Customer's withdrawal from the LBMP Market(s) and/or all of the ISO-Administered Markets to secure the Customer's estimated remaining financial obligations, including, but not limited to, true-up payments or other invoice adjustments, the Customer shall be required to provide secured credit according to the following formula:

$$\begin{aligned} \text{RCC} = & \left[ \sum_{N4} (4 \text{ month settlement} - \text{associated initial settlement}) \right] \\ & + \left[ \sum_{N8} (\text{Final bill close-out settlement} - \text{associated 4 month settlement}) \right] \end{aligned}$$

Where:

RCC	=	The amount of secured credit to be required following a Customer's withdrawal
N4	=	Each month in the most recent four-month period with a 4 month settlement
N8	=	Each month in the most recent eight-month period with a final bill close-out settlement

**For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.14 MST Att K Material Adverse Change

**26.14 Material Adverse Change**

The amount of Unsecured Credit granted to a Customer, if any, and the amount of the Customer's Operating Requirement shall be subject to change, at the discretion of the ISO, in the event that there is a material adverse change affecting the risk of nonpayment by the Customer, which includes, but is not limited to: (a) a material change in financial status pursuant to Section 26.2.1.4 of this Attachment K, (b) Customer's failure to timely cure its default under the ISO Tariffs or the tariffs of another independent system operator or regional transmission organization, (c) the issuance of a notice of alleged violation or show cause order, imposition of a sanction or other administrative order by the Federal Energy Regulatory Commission, the Commodity Futures Trading Commission, Environmental Protection Agency, New York State Public Service Commission, New York State Department of Environmental Conservation or any other regulatory body, independent system operator, or regional transmission organization, including the ISO, which could have a material adverse effect on the Customer's financial condition, (d) a downgrade of an Equivalency Rating, (e) a significant change in the Customer's "Expected Default Frequency (EDF)" as determined by Moody's KMV CreditEdge, (f) a significant variation in the Customer's credit evaluation, (g) a significant increase in a Customer's credit default swap (CDS) spreads, or (h) a significant decline in a Customer's market capitalization. In the event the ISO invokes its rights pursuant to this Section 26.14, the ISO will provide the affected Customer with a written explanation of the reasons the ISO declared a material adverse change.

**Table K-1 Tangible Net Worth Credit Matrix**

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### For discussion at April 2019 Management Committee Meeting

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26.14 MST Att K Material Adverse Change

Customer Rating				Starting Point for Determining Unsecured Credit
Senior Long-term Unsecured Debt Rating		Issuer Rating or Equivalency Rating		(% of Tangible Net Worth)
S&P, Fitch, and Dominion	Moody's	S&P, Fitch, Dominion, and NYISO	Moody's	
A+ or higher	A1 or higher	AA- or higher	Aa3 or higher	7.5%
A	A2	A+	A1	6.5%
A-	A3	A	A2	5.0%
BBB+	Baa1	A-	A3	4.0%
BBB	Baa2	BBB+	Baa1	2.5%
BBB-	Baa3	BBB	Baa2	1.5%
BB+ or lower	Ba1 or lower	BBB- or lower	Baa3 or lower	0%

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### For discussion at April 2019 Management Committee Meeting

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26 MST Att K Appendix K-1 - Form of Customer Prepayment Agreement

#### Appendix K-1 - Form Of Customer Prepayment Agreement

THIS PREPAYMENT AGREEMENT, effective as of **[date]** (“Prepayment Agreement”) is entered into by and between the New York Independent System Operator, Inc. (“NYISO”) and **[full legal name of customer]** (“Customer”). Capitalized terms used and not otherwise defined herein shall have the meaning ascribed to those terms in the Open Access Transmission Tariff (“OATT”) or the Market Administration and Control Area Services Tariff (“Services Tariff”), as context requires.

1. **Prepayment to Reduce Operating Requirement.** Customer agrees to make a payment each week for purchases of Energy and Ancillary Services (“Prepayment”) in order to reduce the Energy and Ancillary Services Component of its Operating Requirement pursuant to Section 26.4.2.1 of Attachment K of the Services Tariff.
2. **Prepayment Amount.** The amount of each Prepayment (“Prepayment Amount”) shall be the NYISO’s reasonable estimate, based on the charges incurred by Customer during the previous week, of the charges that Customer will incur during the following week for purchases of Energy and Ancillary Services in the NYISO-administered markets. The initial Prepayment Amount is \$**[amount]**. NYISO shall inform Customer of any change in the Prepayment Amount not later than 11:00 A.M. EST on the last business day prior to the day on which the next Prepayment is due. Amounts owed to Customer by NYISO in regular weekly settlements shall not reduce or offset the Prepayment Amount.
3. **Manner and Timing of Payment.** Customer shall make each Prepayment not later than 4:00 P.M. EST on the second business day after the NYISO requests Prepayment by wire transfer, or other payment method, if any, authorized by ISO Procedures, to the account designated by NYISO.
4. **Supplemental Payment.** In the event that NYISO determines that a Prepayment is less than the charges incurred or estimated to be incurred by Customer for purchases of Energy and Ancillary Services in the week for which the Prepayment is made, Customer shall make a supplemental payment upon written demand by NYISO. NYISO shall specify in its demand the amount of the supplemental payment and the time for such payment to be made; *provided, however*, that the payment shall not be due sooner than 4:00 P.M. EST on the next business day.
5. **Overpayment.** In the event that NYISO determines that a Prepayment exceeds the charges incurred or estimated to be incurred by Customer for purchases of Energy and Ancillary Services in the week for which the Prepayment is made, NYISO shall credit the difference toward Customer’s next Prepayment and shall notify Customer of the revised Prepayment Amount.
6. **Termination.** Customer may terminate this Prepayment Agreement upon ten (10) days written notice to NYISO. NYISO may terminate this Prepayment Agreement immediately upon written notice to

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the Customer in the event that Customer fails to perform in strict accordance with the terms hereof. In addition, this Prepayment Agreement shall terminate upon any amendment of the OATT or the Services Tariff that eliminates the prepayment mechanism thereunder or requires material modification of this Prepayment Agreement.

7. Regular Weekly Settlements. Nothing in this Prepayment Agreement shall alter the obligation of Customer or NYISO to pay amounts owed in accordance with the NYISO's regular weekly settlement process pursuant to the terms of the OATT and the Services Tariff, which amounts shall be net of payments made pursuant to this Prepayment Agreement.

8. Interest. Customer shall not earn interest on its Prepayments. NYISO shall apply any interest actually earned on Prepayments to offset NYISO costs otherwise recovered through Schedule 1 of the OATT and Rate Schedule 1 of the Services Tariff.

9. Communications. All communications pursuant to this Prepayment Agreement shall be in writing, deemed effective when received, and delivered by hand with receipt of delivery, registered mail, or facsimile with confirmation of receipt to the following addresses:

NYISO:

Attn: Credit Manager

New York Independent System Operator, Inc.

10 Krey Boulevard

Rensselaer, New York 12144

Fax: (518) 356-7505

Customer:

Attn: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Fax: \_\_\_\_\_

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### **For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26 MST Att K Appendix K-1 - Form of Customer Prepayment Agreement

NYISO or Customer may change the address provided for receipt of communications pursuant to this Prepayment Agreement by providing written notice to the other party.

10. Expenses. Customer shall pay all reasonable costs incurred by NYISO to enforce this Prepayment Agreement, including attorney fees and expenses.
11. Amendment and Waiver. The terms and provisions of this Prepayment Agreement may not be amended or waived except in writing and signed by NYISO and Customer.
12. Entire Agreement. This Prepayment Agreement embodies the entire agreement between NYISO and Customer with respect to the matters set forth herein, and supersedes all prior such agreements.
13. Severability. Should any provision of this Prepayment Agreement be determined by a court of competent jurisdiction to be unenforceable, all of the other provisions shall remain effective.
14. Choice of Law; Jurisdiction; Venue; and Service of Process. This Prepayment Agreement shall be governed by the laws of the State of New York without regard to conflict of laws principles. Customer irrevocably submits to the jurisdiction of any New York court or any United States court sitting in New York over any action or proceeding arising out of or relating to this Prepayment Agreement and irrevocably agrees that all claims in such action or proceeding may be heard and determined by such court. Customer agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Customer waives any objection to venue on the basis of forum non conveniens. Customer irrevocably consents to the service of process in any action or proceeding by the mailing of copies of such process to Customer at its address set forth herein. Customer agrees that any action or proceeding brought against NYISO shall be brought only in a New York court or a United States court sitting in New York. Nothing herein shall affect the right of NYISO to bring any action or proceeding against the Customer or its property in the courts of any other jurisdictions.
15. Waiver of Jury Trial. CUSTOMER IRREVOCABLY, VOLUNTARILY, AND WITH ADVICE OF COUNSEL WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY IN ANY ACTION ARISING IN CONNECTION WITH THIS PREPAYMENT AGREEMENT.

IN WITNESS WHEREOF, NYISO and Customer have caused this Prepayment Agreement to be executed by their respective authorized officials.

New York Independent System Operator, Inc.

By:

**DRAFT – FOR DISCUSSION PURPOSES ONLY**

**For discussion at April 2019 Management Committee Meeting**

NYISO Tariffs --> Market Administration and Control Area Services Tariff (MST) --> 26 MST Attachment K - Creditworthiness Requirements For Cust --> 26 MST Att K Appendix K-1 - Form of Customer Prepayment Agree

Name:

Title:

**[Customer]**

By:

Name:

Title: