



IESO Charge Types and Equations

Issue 84.0

LST

This document enumerates the various charge types and equations used in the IESO settlements process for IESO-Administered markets that are subject to a functional deferral, and those that are NOT subject to a functional deferral.

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This document may contain a summary of a particular *market rule*. Where provided, the summary has been used because of the length of the *market rule* itself. The reader should be aware, however, that where a *market rule* is applicable, the obligation that needs to be met is as stated in the “Market Rules”. To the extent of any discrepancy or inconsistency between the provisions of a particular *market rule* and the summary, the provision of the *market rule* shall govern.

See also “Notice to *Electricity Storage Participants*” in Section 2.2.

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Related Documents

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Table of Changes

| Reference (Section and Paragraph) | Description of Change |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | Edited CACP, CBOC _k , CAEO ^m _{h,k} , CICAP ^m _{h,k} , DREBQ ^m _{h,k} , DRSQTY, HDRDC, HDRBP, OCMW _k , RAC ^m _k to reflect administrative updates related to the Capacity Auction |
| 2.2 | Edited charge types 1314-1322, and 1350-1351 to reflect administrative updates related to the Capacity Auction |

1. Introduction

1.1 Purpose

The purpose of this document is to provide the reader with the formulas and variable definitions behind each different *charge type* implemented in the *IESO Settlements* process including tax treatment. Furthermore, this document relates each *charge type* to the high-level description of the *settlement amount* within the *IESO market rules* and, where applicable, notes any aspects of the implementation of the *charge type* itself.

1.2 Scope

This document provides the formulas and the HST Tax treatment for each *charge type* implemented in the *IESO Settlements* System and those *charge types* which are currently the subject of a Functional Deferral. This document does not, however, provide the format of the information provided to *market participants* on *settlement statements* with respect to each *charge type*. For more information on these topics, the reader is directed to the following Technical Interface Document - “Format Specification for Settlement Statement Files and Data Files”.

1.3 Tax Treatment

The *IESO* is a registrant for purposes of the *Excise Tax Act* and all or substantially all of the supplies made by the *IESO* are taxable for GST/HST purposes.

The *IESO* administers the *IESO-administered markets* in compliance with the current provisions of the *Excise Tax Act* and the published rulings, administrative policies, and assessing practices of the Canada Revenue Agency. The *IESO* conducts regular tax reviews with its advisors to ensure that transactions within the *IESO-administered markets* comply with the foregoing.

Market participants should consult their own legal and tax advisors for advice with respect to the tax consequences of transactions in the *IESO-administered markets*.

1.4 Who Should Use This Document

This document is intended for *market participants* in the *IESO-administered markets* who are seeking information regarding the calculations of *settlement amounts* related to each *charge type*. Depending on the activity of the *market participant* in the various *IESO-administered markets*, these *charge types* may have varying degrees of relevance to each *market participant* with respect to their financial settlements.

1.5 Conventions

Usage of an italicized term shall take on the meaning ascribed to that term in the *IESO market rules*.

Unless otherwise noted, usage of variable subscripts and superscripts within this document shall mirror the same usage with in Chapter 9 of the *IESO market rules*. One notable exception is the usage of notation to sum across *settlement amounts* for *charge type* “c”. This is further noted in Section 2.2 of this document.

1.6 How This Document is Organized

This document is divided in 6 major subsections as follows:

- Section 2.1:** A table containing a description of each variable used within **Section 2.2**.
- Section 2.2:** A table describing *IESO charge types* and equations that are part of an active *IESO-administered market*.
- Section 2.3:** This section contains a description of rounding conventions for variables described in **Section 2.1**.
- Section 2.4:** This section contains a description of rounding conventions for *charge type* calculations described in **Section 2.2**.
- Section 2.5:** This section provides a description of *physical bilateral contract quantities*, their usage by the settlements system, and their use by *market participants* as a vehicle for transferring components of *hourly uplift*.
- Section 2.6:** This section describes how Day-Ahead import, export and linked wheel transactions are subject to an “Offer Price Test” in order to determine if they are exempt from the Day-Ahead Failure Charges (*charge types*, 1135, 1136 and 1134).

– End of Section –

2. IESO Charge Types and Equations that are Part of an Active IESO-Administered Market

2.1 Variable Descriptions

The following table contains descriptions of each variable used within Section 2.2, describing *IESO charge types* and equations that are part of an active *IESO-administered market*.

| Key to the Table Below | | | | |
|------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| This column denotes the abbreviated name of each variable used within Section 2.2. | The full name of each variable used within Section 2.2. | A brief description of each variable used within the formulas illustrated within Section 2.2. | The relevant reference to the variable in question within the <i>IESO market rules</i> . The format of each reference is: [Chapter] [Section no.] e.g. Chapter 9 Section 3.1.6 would appear as: 9.3.1.6 | This section notes any aspects of the implementation of the variable within the <i>IESO settlements</i> process which are otherwise not described in the <i>IESO market rules</i> – OR – refers the reader to the appropriate documentation. |

| Key to the Table Below | | | | |
|--------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| AAD | Adjustment Account Disbursement | The total dollar value of all disbursements from the <i>IESO adjustment account</i> authorized by the <i>IESO Board</i> in the current <i>energy market billing period</i> . | 9.6.18.6 | Same as <i>IESO</i> market rules. |
| $AQEI_{k,h}^{m,t}$ | Allocated Quantity of Energy Injected | Allocated quantity in MWh of <i>energy</i> injected by <i>market participant 'k'</i> at <i>RWM 'm'</i> in <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.9 | Represents only those quantities derived from loss-adjusted and totalized <i>metering data</i> . Quantities derived from <i>interchange schedule data</i> is captured in the variable SQEI (see below). |
| $AQEW_{k,h}^{m,t}$ | Allocated Quantity of Energy Withdrawn | Allocated quantity in MWh of <i>energy</i> withdrawn by <i>market participant 'k'</i> at <i>RWM 'm'</i> in <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.9 | Represents only those quantities derived from loss-adjusted and totalized <i>metering data</i> . Quantities derived from <i>interchange schedule data</i> is captured in the variable SQEW (see below). |
| $AQOR_{r,k,h}^{m,t}$ | Allocated Quantity of Operating Reserve | Allocated quantity in MW of <i>class r reserve</i> for <i>market participant 'k'</i> at <i>RWM 'm'</i> in <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.9 | Same as <i>IESO market rules</i> and equivalent to DQSR (see below). |

| Key to the Table Below | | | | |
|--------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| BE | Energy Offers | <p>A matrix of ‘n’ <i>price-quantity pairs</i> offered by <i>market participant ‘k’</i> to supply <i>energy</i> during <i>settlement hour ‘h’</i>.</p> <p><i>Offer prices</i> in this matrix may be altered to a “lower limit” for the purposes of calculating <i>charge type 105 (Congestion Management Settlement Credit for Energy)</i> where any such <i>offer price</i>:</p> <ol style="list-style-type: none"> 1) Is associated with a <i>generation facility</i> located within Ontario; or imports and 2) Is less than a specified “lower limit” where such limit is the lesser of \$0.00/MWh and the <i>energy market price</i> for the applicable <i>dispatch interval</i>. <p>The situational criteria and threshold for applying such adjustments are further described in <i>IESO market rules</i> section 9.3.5.6. and 9.3.5.7.</p> | 9.3.5.2, 9.3.5.6 and 9.3.5.7 | Same as <i>IESO market rules</i> . |
| BL | Energy Bids | <p>A matrix of ‘n’ <i>price-quantity pairs</i> bid by <i>market participant ‘k’</i> to withdraw <i>energy</i> by a <i>dispatchable load</i> during <i>settlement hour ‘h’</i>.</p> | 9.3.5.2 | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|---------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| BR_r | Operating Reserve Offers | A matrix of n <i>price-quantity pairs</i> offered by <i>market participant ‘k’</i> to supply class r <i>operating reserve during settlement hour ‘h’</i> . | 9.3.5.2 | Same as <i>IESO market rules</i> . |
| $BCQ_{s,k,h}^{m,t}$ | Physical Bilateral Contract Quantity of Energy bought | <i>Physical bilateral contract quantity of energy in MWh bought by buying market participant ‘k’ from selling market participant ‘s’ at RWM or intertie metering point ‘m’ for each metering interval ‘t’ in settlement hour ‘h’.</i> | 9.3.1.6 | Same as <i>IESO market rules</i> . |
| $BCQ_{k,b,h}^{m,t}$ | Physical Bilateral Contract Quantity of Energy sold | <i>Physical bilateral contract quantity of energy in MWh sold by selling market participant ‘k’ to buying market participant ‘b’ at RWM or intertie metering point ‘m’ for each metering interval ‘t’ in settlement hour ‘h’.</i> | 9.3.1.6 | Same as <i>IESO market rules</i> . |
| $CACP^z$ | Capacity Auction Clearing Price | The <i>capacity auction clearing price</i> (in \$/MW per day) for the relevant <i>trading day</i> in electrical zone ‘z’. | 9.3.1.10 | Same as <i>IESO market rules</i> |
| $CACP_h^z$ | Hourly Capacity Auction Clearing Price | The <i>capacity auction clearing price</i> for <i>settlement hour ‘h’</i> (in \$/MW per hour) within the <i>availability window</i> in electrical zone ‘z’, determined by taking the <i>capacity auction clearing price</i> for the applicable <i>obligation period</i> and electrical zone and dividing by the number of <i>settlement hours</i> within the | 9.3.1.10 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|--------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <i>availability window</i> of all <i>trading days</i> within the <i>obligation period</i> . | | |
| $CAEO_{h,k}^m$ | Capacity Auction Energy Offer | The quantity of <i>auction capacity</i> for <i>settlement hour 'h'</i> (in MW) made available by <i>capacity auction resource</i> for <i>capacity market participant 'k'</i> at <i>delivery point</i> or <i>intertie metering point 'm'</i> in the relevant <i>settlement hour</i> of the <i>availability window</i> determined as the lesser of the <i>resource's energy offers</i> submitted in the day-ahead commitment process, pre-dispatch, and <i>real-time energy market</i> , as applicable. | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| $CARC_k^m$ | Capacity Auction Registered Capability | The quantity of <i>energy</i> (in MW) of the <i>hourly demand response resource's demand response contributors</i> total registered capability for <i>capacity market participant 'k'</i> at <i>delivery point 'm'</i> , as registered with the <i>IESO</i> in accordance with the applicable <i>market manual</i> | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| $CBOC_k^m$ | Buy-out Capacity | The buy-out capacity is an amount (in MW) by which the <i>capacity obligation</i> for the <i>obligation period</i> for <i>capacity auction resource</i> for <i>capacity market participant 'k'</i> at <i>delivery point</i> or <i>intertie metering point 'm'</i> is being reduced as per the <i>capacity market participant's</i> election pursuant to section 4.7J.3 of Chapter 9. | 9.3.1.10 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| CBMP _k | Total net volume of electricity withdrawn from the <i>IESO-controlled grid</i> by applicable Class B market participant or licensed distributor that is also a <i>market participant</i> for the month | The total net volume of electricity withdrawn from the <i>IESO-controlled grid</i> by applicable Class B market participant (as that term is defined in the regulation) or licensed distributor that is a <i>market participant</i> ‘k’ for the month. | N/A | N/A – See regulations. |
| CBRR | Global adjustment Class B recovery rate | Global Adjustment Class B recovery rate for the month per Ontario Regulation 429/04. | N/A | N/A – See regulations. |
| CCO ^m _{k,h} | Capacity Obligation (MW) | The <i>capacity obligation</i> (in MW) for the <i>obligation period per capacity auction resource</i> for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> or <i>intertie metering point</i> ‘m’ in the relevant <i>settlement hour</i> ‘h’, as may be adjusted pursuant to the <i>market rules</i> .. | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| CGC | Submitted Combined Guaranteed Costs | A financial amount consisting of fuel cost components defined on a <i>per-start</i> basis for a given <i>generation unit</i> calculated in a manner consistent with the applicable <i>market manual</i> , and encompassing the following elements: 1) Fuel and operation and maintenance (O&M) costs associated with unit synchronization to the <i>IESO-controlled grid</i> for a given start-up event (costs submitted via Online <i>IESO</i>). | 9.4.7B | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | 2) Fuel and O&M costs associated with moving the <i>generation unit</i> from a valid start to its <i>minimum loading point</i> (costs submitted via Online <i>IESO</i>). | | |
| $CICAP^m_k$ | Capacity Auction Cleared <i>ICAP</i> | The <i>cleared ICAP</i> (in MW) for <i>capacity auction resource</i> at <i>delivery point</i> or <i>intertie metering point</i> ‘m’ for <i>capacity market participant</i> ‘k’ in the applicable <i>obligation period</i> , as determined in accordance with the applicable <i>market manual</i> | 9.3.1.10 | Same as <i>IESO market rules</i> |
| $CNPF_{tm}$ | Capacity Auction Non-Performance Factor | For a given <i>energy market billing period</i> , the non-performance factor as listed in Section 7.1 of <i>Market Manual 12</i> . | 9.3.1.10 | Same as <i>IESO market rules</i> |
| $DA_BE_{k,h}^{m,t}$ | <i>Energy Offer</i> submitted into the <i>schedule of record</i> at a <i>delivery point</i> | <i>Energy offers</i> submitted in day-ahead, represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant</i> ‘k’ at <i>delivery point</i> ‘m’ during <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’ arranged in ascending order by the offered price in each <i>price-quantity pair</i> where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2. | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . |
| $DA_BE_{k,h}^{i,t}$ | <i>Energy Offer</i> submitted into the <i>schedule of record</i> at a <i>intertie metering point</i> | <i>Energy offers</i> submitted in day-ahead, represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant</i> ‘k’ at <i>intertie metering point</i> ‘i’ during <i>metering</i> | 9.3.8A.2B and 9.3.8B.2 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <i>interval ‘t’ of settlement hour ‘h’ arranged in ascending order by the offered price in each price-quantity pair where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2.</i> | | |
| DA _{BL_{k,h}} ^{i,t} | <i>Energy Bids submitted into the schedule of record</i> | Energy bids submitted in day-ahead, represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant ‘k’</i> at <i>intertie metering point ‘i’</i> during <i>metering interval ‘t’ of settlement hour ‘h’</i> arranged in ascending order by the offered price in each <i>price-quantity pair</i> where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2. | 9.3.1.2B.7 and 9.3.8D.2 | Same as <i>IESO market rules</i> |
| DA_CGC | Submitted Day-Ahead Combined Guaranteed Costs | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. A financial amount consisting of fuel cost components defined on a <i>per-start</i> basis for a given <i>generation unit</i> calculated in a manner consistent with the applicable <i>market manual</i> , and encompassing the following elements: 1) Fuel and operation and maintenance (O&M) costs associated with unit synchronization to the <i>IESO-controlled</i> | 9.4.7D.1 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <p><i>grid</i> for a given start-up event (costs submitted via <i>IESO</i> Gateway).</p> <p>2) Fuel and O&M costs associated with moving the <i>generation unit</i> from a valid start to its <i>minimum loading point</i> (costs submitted via <i>IESO</i> Gateway).</p> | | |
| DA_DQSI _{k,h} ^{m,t} | <i>Schedule of Record</i> Dispatch Quantity of Energy Scheduled for Injection at a delivery point | Day-ahead constrained quantity scheduled for injection by <i>market participant 'k'</i> at <i>delivery point 'm'</i> during <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.2A | Same as <i>IESO</i> market rules. |
| DA_DQSI _{k,h} ^{i,t} | <i>Schedule of Record</i> Dispatch Quantity of Energy Scheduled for Injection at an intertie metering point | Day-ahead constrained quantity scheduled for injection by <i>market participant 'k'</i> at <i>intertie metering point 'i'</i> during <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.2A | Same as <i>IESO</i> market rules. |
| DA_DQSW _{k,h} ^{i,t} | <i>Schedule of Record</i> Dispatch Quantity of Energy Scheduled for Withdrawal | Day-ahead constrained quantity scheduled for withdrawal by <i>market participant 'k'</i> at <i>intertie metering point 'i'</i> during <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.2A | Same as <i>IESO</i> market rules. |
| DA_ELMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the export zone | Day-ahead constrained schedule intertie price at the <i>delivery point 'm'</i> of the sink for the export transaction during <i>metering interval 't'</i> of <i>settlement hour 'h'</i> . | 9.3.1.2A | Same as <i>IESO</i> market rules. |
| DA_ILMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie</i> | Day-ahead constrained schedule intertie price at the <i>delivery point 'm'</i> of the source for the | 9.3.1.2A | Same as <i>IESO</i> market rules. |

| Key to the Table Below | | | | |
|--------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | <i>metering point</i> in the import zone | import transaction during <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’. | | |
| $DA_SNLC_{k,h}^m$ | Speed-no-load costs submitted into the <i>schedule of record at a delivery point</i> | As-offered <i>speed-no-load cost</i> associated with <i>three-part offers</i> for a given <i>settlement hour</i> ‘h’ for market participant ‘k’ at <i>delivery point</i> ‘m’. | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . |
| $DA_SNLC_{k,h}^p$ | Speed-no-load costs submitted into the <i>schedule of record at a pseudo-unit</i> | As-offered <i>speed-no-load cost</i> associated with <i>three-part offers</i> for a given <i>settlement hour</i> ‘h’ for market participant ‘k’ at <i>pseudo-unit</i> ‘p’. | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . |
| $DA_SUC_{k,h}^m$ | Start-up costs submitted into the <i>schedule of record at a delivery point</i> | As-offered <i>start-up cost</i> associated with <i>three-part offers</i> for a given <i>settlement hour</i> ‘h’ for market participant ‘k’ at <i>delivery point</i> ‘m’ where <i>settlement hour</i> ‘h’ is the initial hour in the DACP start event. | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . |
| $DA_SUC_{k,h}^p$ | Start-up costs submitted into the <i>schedule of record at a pseudo-unit</i> | As-offered <i>start-up cost</i> associated with <i>three-part offers</i> for a given <i>settlement hour</i> ‘h’ for market participant ‘k’ at <i>pseudo-unit</i> ‘p’ where <i>settlement hour</i> ‘h’ is the initial hour in the DACP start event. | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . |
| $DIPC_{k,h}^{m,t}$ | Derived Interval Price Curve | <i>Energy price curves</i> derived per interval from submitted hourly day-ahead PSU <i>energy offers</i> , represented as a N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant</i> ‘k’ at <i>delivery point</i> ‘m’ (where ‘m’ is a CT or ST delivery point) during | 9.3.1.11 | Same as <i>IESO market rules</i> . Refer to Market Manual 9.5, Appendix B for a detailed description of DIPC. |

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <i>metering interval ‘t’ of settlement hour ‘h’ arranged in ascending order by the offered price in each price quantity pair where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2.</i> | | |
| $DIGQ_{k,h}^{m,t}$ | Derived Interval Guaranteed Quantity | Portion of the day-ahead constrained quantity scheduled for injection that is eligible for DA-PCG for market participant ‘k’ at pseudo unit ‘p’ during metering interval ‘t’ of settlement hour ‘h’ | 9.3.1.11 | Same as <i>IESO market rules</i> . Refer to Market Manual 9.5, Appendix C for a detailed description of DIGQ. |
| $DQSI_{k,h}^{m,t}$ | Dispatch Quantity of Energy Scheduled for Injection | Dispatch quantity of energy scheduled for injection in the real-time schedule by market participant ‘k’ at location ‘m’ in metering interval ‘t’ of settlement hour ‘h’. | 9.3.1.3 and 9.3.1.4A | Same as <i>IESO market rules</i> . N.B. Location m is further subject to the functional deferral described in Section 3.1.4A of Chapter 9 of the market rules (ref. 9.3.1.4A). |
| $DQSR_{r,k,h}^{m,t}$ | Dispatch Quantity Schedule of Operating Reserve | Dispatch quantity schedule of class r reserve for market participant ‘k’ at location ‘m’ in metering interval ‘t’ of settlement hour ‘h’. | 9.3.1.4 and 9.3.1.4A | Same as <i>IESO market rules</i> . N.B. Location m is further subject to the functional deferral described in Section 3.1.4A of Chapter 9 of the market rules (ref. 9.3.1.4A). |
| $DQSW_{k,h}^{m,t}$ | Dispatch Quantity of Energy Scheduled for Withdrawal | Dispatch quantity of energy scheduled for withdrawal in the real-time schedule by market participant ‘k’ at location ‘m’ in metering interval ‘t’ of settlement hour ‘h’. | 9.3.1.3 and 9.3.1.4A | Same as <i>IESO market rules</i> . N.B. Location m is further subject to the functional deferral described in Section 3.1.4A of Chapter 9 of the market rules (ref. 9.3.1.4A). |

| Key to the Table Below | | | | |
|--------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | | | |
| DRACP | Demand Response Auction Clearing Price | The <i>demand response auction clearing price</i> for the <i>commitment period</i> and zone. | N/A | Refer to Market Manual 5.5 |
| $DRACP_h$ | Hourly Demand Response Auction Clearing Price | The <i>demand response auction clearing price</i> for the <i>commitment period</i> and zone divided by the hours of availability for a day. | N/A | Refer to Market Manual 5.5 |
| $DRBOC_k$ | Demand Response Buy-Out Capacity | The buy-out capacity is an amount that is being reduced from the <i>demand response capacity obligation</i> for <i>demand response market participant 'k'</i> . | N/A | Refer to Market Manual 5.5 |
| $DRCO_k$ | Demand Response Capacity Obligation (MW) | The <i>demand response capacity obligation</i> amount for the <i>commitment period</i> and zone for <i>demand response market participant 'k'</i> . The initial capacity obligation is acquired through the <i>demand response auction</i> and subject to being reduced via the buy-out process. | N/A | Refer to Market Manual 5.5 |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| DREBQ ^m _{k,h} | Demand Response Energy Bid Quantity | The quantity (in MW) of <i>auction capacity</i> made available by an <i>hourly demand response resource</i> or <i>capacity dispatchable load resource</i> for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ in <i>settlement hour</i> ‘h’ of the <i>availability window</i> , determined as the lesser of the <i>resource’s energy bids</i> submitted in the day-ahead commitment process, pre-dispatch, and <i>real-time energy market</i> , as applicable, and where such value exceeds the CARC _k ^m for the resource in the relevant <i>energy market billing</i> , the DREBQ ^m _{k,h} shall equal such CARC _k ^m | 9.3.1.10 | Same as <i>IESO market rules</i> |
| DRNPF | Demand Response Non-Performance Factor | The non-performance factor as listed in Section 7.1 of Market Manual 12 that corresponds and applies to the month being settled. | N/A | Refer to Market Manual 5.5 |
| DRSQty ^m _{k,h} | Demand Response Scheduled Quantity | The quantity of <i>energy</i> (in MW) scheduled for withdrawal in the <i>real time market</i> by <i>market participant</i> ‘k’ at <i>delivery point</i> ‘m’ for an <i>hourly demand response resource</i> in <i>settlement hour</i> ‘h’ of the <i>availability window</i> , as described in the <i>real time schedule</i> . | 9.3.1.10 | Same as <i>IESO market rules</i> |
| EEQ | Excluded Energy Quantity | The total volume of <i>energy</i> (MWh) supplied to Fort Frances Power Corporation | N/A – subject to regulations made | N/A – See regulations. |

| Key to the Table Below | | | | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | Distribution Inc. by Abitibi-Consolidated Inc. during the month. | pursuant to Bill 100. | |
| $EGEI_k$ | Embedded Generator Energy Injection | The total volume of <i>energy</i> (MWh) supplied by <i>embedded generators</i> during the month to <i>distributors</i> who are <i>market participants</i> and to all embedded distributors to whom the <i>market participant</i> ‘k’ is the host <i>distributor</i> , adjusted for losses as required by the <i>OEB</i> , Retail Settlement Code. | N/A – subject to regulations made pursuant to Bill 100. | N/A – See regulations. |
| $EIM_{k,h}$ | Operating Profit Function for the IMPORT of Energy under the Intertie Offer/Bid Guarantee Settlement Credit | This Operating Profit function is used for the calculation of the Intertie Offer/Bid Guarantee Settlement Credit (IOBG) with respect the IMPORT of <i>energy</i> . | 9.3.8A | EIM_{k,h} IS NOT A VARIABLE EIM _{k,h} is the output of a particular usage of the Operating Profit (OP) function defined within Chapter 9, Section 3.8A. EIM _{k,h} Input variables into the Operating Profit (OP) Function include: MQSI, EMP, and BE. |
| $EMP_h^{i,t}$ | 5-minute Energy Market Price at the Interties | Energy <i>market price</i> applicable to <i>intertie metering point</i> ‘i’ in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’. | 9.3.1.3 | Same as <i>IESO market rules</i> . |
| $EMP_h^{m,t}$ | 5-minute Energy Market Price within Ontario | Energy <i>market price</i> applicable to <i>RWM</i> ‘m’ in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’. | 9.3.1.3 | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $EMP_h^{REF,t}$ | 5-minute Energy Market Reference Price | Reference energy <i>market price</i> used to value losses in the calculation of the <i>Transmission Charge Reduction Fund</i> ¹ during in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’. | 9.3.1.3 and 9.3.6.2 | Same as <i>IESO market rules</i> . |
| ETS | Export Transmission Service Tariff Rate | Export Transmission Service Tariff Rate in units of \$/MWh. | N/A | Subject to the OEB “Ontario Transmission Rate Order”. |
| FP_h^m | Fixed Energy Rate | A fixed <i>energy rate</i> for all <i>metering intervals</i> in <i>settlement hour</i> ‘h’. | N/A – subject to regulations made pursuant to <i>Ontario Energy Board Act, 1998</i> until March 31, 2005 and by the <i>OEB</i> under such regulations commencing April 1, 2005. | N/A – See regulations. |
| FPC_h^m | Rate for a designated group of <i>charge types</i> (see description of <i>charge type</i> 141) | This variable is reserved for <i>charge type</i> 141 and applies with respect to charges for the period commencing December 1, 2002 and ending March 31, 2005. See Ontario Regulation 436/02 and Ontario Regulation 98/05. | N/A – subject to regulations made pursuant to <i>Ontario Energy Board Act, 1998</i> . | N/A – See regulations |

¹ *Market Rules* ref.: Section 3.6.2 of Chapter 9.

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $GA_AQEW_{g,k,h,M}^{m,t}$ | Allocated Quantity of Energy Withdrawn for elements of the Global Adjustment distribution | Allocated quantity in MWh of <i>energy</i> withdrawn by <i>market participant</i> or Distributor ‘k’ at <i>RWM</i> ‘m’ in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’ in month ‘M’ for element “g” Where ‘g’ is 1 for Class A Market Participant or Consumer load, and 2 for <i>energy</i> withdrawn by Generator ‘k’ in the course of providing Ancillary Services. | | |
| GAR_B | Global Adjustment Rate for Class B | GA Class B Rate. | N/A | N/A – See regulations. |
| GRP | Generator Regulated Price | A regulated price (\$/MWh) with respect to output of OPG’s regulated generating stations, set by the <i>OEB</i> . | N/A – subject to regulation by the Ontario Energy Board. | N/A – See regulations |
| $GSSR_AQEW_{k,h}^{m,t}$ | Qualified Allocated Quantity of Energy Withdrawn for Generation Station Service Reimbursement (GSSR) | Qualified Allocated quantity in MWh of <i>energy</i> withdrawn by <i>market participant</i> ‘k’ at <i>RWM</i> ‘m’ in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’ by an eligible generation facility | 9.2.1A.9 | |
| $HDRDC_{k,h}^m$ | Measured hourly <i>demand response capacity</i> | The delivered capacity (in MWh) by <i>hourly demand response resource</i> for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ in <i>settlement hour</i> ‘h’ within the activation | 9.3.1.10 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|--------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <p>window of the applicable test activation, calculated as follows:</p> $\text{Min}(\text{curtailed } MW_{k,h}^m, \sum_{t=1}^{12} (\text{Min}(\text{TBQ}_{k,h}^m, \text{CARC}_k^m, \text{CCO}_{k,h}^m)) - \text{DQSY}_{k,h}^{m,t}/12))$ <p>Where:</p> <p>(a) “Curtailed $MW_{k,h}^m$” is the difference (in MWh) between baseline value, calculated in accordance with the applicable <i>market manual</i>, and actual consumption measurement data by <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ for an <i>hourly demand response resource</i> for <i>settlement hour</i> ‘h’, as calculated in accordance with the applicable <i>market manual</i>.</p> <p>(b) “$TBQ_{k,h}^m$” is the offered quantity of <i>energy</i> (in MW) contained in the last lamination of the <i>price quantity pair</i> of the <i>energy bid</i> submitted in the <i>real time market</i> by <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ for an <i>hourly demand response resource</i> in <i>settlement hour</i> ‘h’</p> | | |

| Key to the Table Below | | | | |
|---------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $HDRBP_{k,h}^m$ | HDR Bid Price | The price component (in \$) of the <i>energy bid</i> submitted in the <i>real time market</i> for <i>hourly demand response resource</i> by <i>capacity market participant ‘k’</i> at <i>delivery point ‘m’</i> for <i>settlement hour ‘h’</i> within the <i>availability window</i> | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| HDRTAPR | Out of Market Test Activation Payment Rate | The out of market test activation rate (in \$), as set out in the applicable <i>market manual</i> . | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| $HOEP_h$ | Hourly Ontario Energy Price | <i>Hourly Ontario Energy Price</i> in <i>settlement hour ‘h’</i> . | 9.3.1.3 | Same as <i>IESO market rules</i> . |
| $IOG_{FV_{k,h}}^i$ | IOG Floor Value | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. The $IOG_{FV_{k,h}}^i$ is a floor value (in dollars to the nearest cent) derived from: <ul style="list-style-type: none"> • The day-ahead offer prices for the import transaction submitted by the <i>market participant</i> over the range of the <i>pre-dispatch of record</i> constrained quantity scheduled for that import transaction; and • Real-time offer prices for the import transaction at the corresponding location in the corresponding <i>settlement hour</i> for any additional | 9.3.8A.8 | Same as <i>IESO market rules</i> See Chapter 9, Section 3.8A.8 for details concerning its formulation. |

| Key to the Table Below | | | | |
|--------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <p><i>energy</i> scheduled above and beyond the <i>pre-dispatch of record</i> constrained quantity scheduled for that import transaction:</p> <p>NOTE: The $IOG_FV_{k,h}^i$ is formulated in the manner described in Chapter 9, Section 3.8A.8 of the <i>IESO market rules</i> and is used in the formulation of the intertie offer guarantee adjustment (see also, Section 2.2 entry for <i>charge type</i> 1137 within this document).</p> | | |
| $LCD_{k,h}^m$ | Line Connection Demand (KW) | Billing Demand for Line Connection Transmission Service (KW) for <i>transmission customer</i> ‘k’ at transmission delivery point ‘m’ during <i>settlement hour</i> ‘h’ in which $LCD_{k,h}^m$ denotes the non-coincident peak demand for the month. | N/A | Subject to the OEB “Ontario Transmission Rate Order”. |
| $MAX_CAP_{k,h}^{m,t}$ | Maximum Capability | The maximum limit used in determining the real-time schedule in the dispatch scheduling and pricing process as described in Chapter 7, Appendix 7.5 for each interval | 9.3.4.2 | |
| MDCAA | Monthly deferred Class A amount to be recovered | The monthly deferred Class A amount to be recovered which equals one twelfth of the total Global Adjustment allocated to Class A customers that was deferred in April, May and June of 2020. | N/A | N/A – See regulations. |

| Key to the Table Below | | | | |
|--------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| MDCBA | Monthly deferred Class B amount to be recovered | The monthly deferred Class B amount to be recovered equals one twelfth of the total Global Adjustment allocated to Class B customers that was deferred in April, May and June of 2020. | N/A | N/A – See regulations. |
| MC_h^m | Minimum Consumption | Used for the OR non-accessibility charges and the calculation of the self-induced dispatchable load CMSC clawback under Business Rule 2. The minimum consumption is equal to the quantity in the price quantity pair where the bidding price is MMCP (i.e., \$2000) at <i>RWM metering point</i> ‘m’ for settlement hour ‘h’. | 9.3.5.1A, 9.3.4.2 | |
| MI | Ordered matrix of $MQSI_{k,h}^{i,t}$ and corresponding IOG settlement amounts | Used for the calculation of the IOG OFFSET settlement amount. A matrix of X pairs of market schedule quantities scheduled for injection by market participant ‘k’ at all <i>intertie metering points</i> ‘i’ in <i>metering interval</i> ‘t’ of settlement hour ‘h’ ($MQSI_{k,h}^{i,t}$) paired with the corresponding component of the <i>intertie offer guarantee settlement credit</i> for each <i>intertie metering point</i> ‘i’. See equation in Chapter 9, Section 3.8A.4 of the IESO market rules for further details. | 9.3.8A.4 | Same as IESO market rules. |
| $MLP_{k,h}^{m,t}$ | Minimum Loading Point | Minimum output of energy the market participant ‘k’ at delivery point ‘m’ can | 9.3.1.2B.7 | Same as IESO market rules. |

| Key to the Table Below | | | | |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | maintain without ignition support in <i>metering interval 't' of settlement hour 'h'</i> . | | |
| $MLP_CONS_{k,h}^{m,t}$ | Minimum Loading Point for a steam turbine resource or a combustion turbine resource associated to a pseudo unit | Minimum output of <i>energy</i> the <i>market participant 'k'</i> at <i>delivery point 'm'</i> can maintain without ignition support in <i>metering interval 't' of settlement hour 'h'</i> . | 9.3.1.2B.7 | Same as <i>IESO market rules</i> . Refer to Market Manual 9.4, Section 4.1.2.2 for a detailed description of constraints applied for PCG eligible combined cycle plants. |
| $MQSI_{k,h}^{m,t}$ | Market Quantity Scheduled for Injection | Market quantity scheduled for injection in the <i>market schedule</i> by <i>market participant 'k'</i> at <i>RWM</i> or <i>intertie metering point 'm'</i> in <i>metering interval 't' of settlement hour 'h'</i> . | 9.3.1.3 | Same as <i>IESO market rules</i> . |
| $MQSI\{adj\}_{k,h}^{m,t}$ | Adjusted Market Quantity Scheduled for Injection | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. Used for the calculation of the IOG OFFSET <i>settlement amount</i> . $MQSI\{adj\}_{k,h}^{i,t}$ is each (and where applicable, adjusted) quantity of <i>energy</i> scheduled for injection in the <i>market schedule</i> by <i>market participant 'k'</i> at an <i>intertie metering point 'i'</i> in <i>metering interval 't' of settlement hour 'h'</i> corresponding with each quantity, $MQSI_{x^*,k,h}^{i,t}$ in matrix MI, row x^* . | 9.3.8A.4 | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $MQSW_{k,h}^{m,t}$ | Market Quantity Scheduled for Withdrawal | Market quantity scheduled for withdrawal in the <i>market schedule</i> by <i>market participant</i> ‘k’ at <i>RWM</i> or <i>intertie metering point</i> ‘m’ in <i>metering interval</i> ‘t’ of <i>settlement hour</i> ‘h’. | 9.3.1.3 | Same as <i>IESO market rules</i> . |
| $NSD_{k,h}^m$ | Network Service Demand (KW) | <p>The Billing Demand for Network Transmission Service (KW) is defined as the higher of:</p> <ul style="list-style-type: none"> transmission customer coincident peak demand (KW) in the hour of the month when the total hourly demand of all PTS customers is highest for the month; and 85% of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on <i>business days</i> defined by the <i>IESO</i>. <p>For the purposes of determining business days for calculating transmission charges, the <i>IESO</i> uses the holidays identified by the Ontario Energy Board.</p> <p>The peak period hours will be between 0700 and 1900 hours Eastern Standard Time during winter (i.e. during standard time) and 0600 to 1800 hours during summer (i.e. during daylight savings time), in conformance with the meter time standard used by the <i>IESO</i> settlement systems.</p> | N/A | Subject to the OEB “Ontario Transmission Rate Order”. |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $OCMW_k^i$ | Over committed MWs | The <i>over committed capacity</i> (in MW) of a <i>generator-backed capacity import resource</i> for <i>capacity market participant ‘k’</i> at <i>intertie metering point ‘i’</i> , as determined by the <i>IESO</i> . | 9.3.1.10 | Same as <i>IESO market rules</i> . |
| ONPAO | Ontario Power Generation Non-Prescribed Assets Output | <p>OPG’s Non-Prescribed Assets are those generation assets operated and controlled by Ontario Power Generation in service as of January 1, 2006, excluding Lennox Generating Station, that are not prescribed assets under section 78.1 of the <i>Ontario Energy Board Act, 1998</i> as amended by the “Electricity Restructuring Act, 2004”.</p> <p>ONPAO refers to the generation output from OPG’s Non-Prescribed Assets, over each hour of the quarter adjusted to take account of volumes sold through forward contracts in effect as of January 1, 2005. For greater certainty, any output from ONPA resulting from fuel conversion by Ontario Power Generation in ONPA, or incremental output from ONPA resulting from refurbishment or expansion is to be excluded from ONPAO.</p> <p>Incremental Output is defined as: $\text{generation output} \times (\text{new total installed capacity} - \text{installed capacity as of January 1, 2006}) / \text{new total installed capacity}$.</p> | N/A | The formula for calculating the OPG Rebate is subject to Ministerial Directive made under Order-in-Council 1062/2006 (May 17, 2006). |

| Key to the Table Below | | | | |
|--------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| OP | Operating Profit Function | The Operating Profit function is used for the calculation of the Congestion Management Settlement Credit (CMSC) with respect to constrained on/off payments for <i>energy</i> , <i>operating reserve</i> . It is also used for the calculation of the Day-Ahead Production Cost Guarantee components, the Day-Ahead Generator Withdrawal Charge, the Day-Ahead Import and Export failure charges, and the Import Offer Guarantee Settlement Credit. | 9.3.5.2 and 9.3.8A.2 | <p>OP IS NOT A VARIABLE</p> <p>OP is a mathematical function defined within Chapter 9, section 3.5.2. of the <i>IESO market rules</i></p> <p>Input variables include: MQSI, MQSW, SQROR AQEI, AQEW, AQOR SQEI, SQEW, DSQI, DSQW, DSQR DA_DQSI, DA_DQSW, PD_DQSI, PD_DQSW</p> <p>BE, BL, BR_r PD_BE, PD_BL DA_BE, DA_BL EMP MLP, MLP CONS DIPC OPCAP</p> <p>OP is also used within Chapter 9, Section 9.8A.2 of the <i>IESO market rules</i> to derive the Energy Import (EIM_{k,h}) sub-component of the</p> |

| Key to the Table Below | | | | |
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| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | | | Intertie Offer Settlement Credit (IOG) using the following input variables: MQSI BE EMP |
| $OPCAP_{k,h}^{m,t}$ | Operating Capacity | De-rating of the generation unit by <i>market participant ‘k’ at delivery point ‘m’ in metering interval ‘t’ of settlement hour ‘h’.</i> | 9.3.1.2B.7 | Same as <i>IESO market rules.</i> |
| $OPE\{adj\}_{k,h}^i$ | Adjusted CMSC component for <i>energy</i> used in the DA-Ahead IOG | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. This congestion management <i>settlement credit settlement amount</i> (CMSC) component is specifically used in the calculation of the Day-Ahead IOG for import transactions that are subject to a <i>constrained-on event</i> in the <i>real-time market.</i> $OPE\{adj\}_{k,h}^i$ is an adjusted component of The congestion management <i>settlement credit settlement amount</i> (CMSC) for <i>market participant ‘k’ at intertie metering point ‘i’ for settlement hour ‘h’</i> in which the constrained schedule is the lesser of $PDR_DQSI_{k,h}^{i,t}$ or | 9.3.8A.2A | ‘OP’ is a mathematical function used within Chapter 9, Section 9.3.8A.2A of the <i>IESO market rules</i> to derive Day-Ahead Intertie Offer Guarantee. Please see the <i>market rules</i> for information regarding its formulation. |

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | $DQSI_{k,h}^{i,t}$ but in all instances, greater than or equal to $MQSI_{k,h}^{i,t}$. | | |
| ORL | Ontario Power Generation Revenue Limit | For the period May 1, 2006 to April 30, 2007 ORL is equal to \$46/ MWh. For the period May 1, 2007 to April 30, 2008 ORL is equal to \$47/ MWh. For the period May 1, 2008 to April 30, 2009 ORL is equal to \$48/ MWh. | N/A | The formula for calculating the OPG Rebate is subject to Ministerial Directive made under Order-in-Council 1062/2006 (May 17, 2006). |
| PAA | Pilot Auction Amount | Refers to the Pilot Auction administered by the <i>Ontario Power Authority</i> in the first half of 2006. The volume in MWh over each hour in the quarter that is sold by Ontario Power Generation through the PA. | N/A | The formula for calculating the OPG Rebate is subject to Ministerial Directive made under Order-in-Council 1062/2006 (May 17, 2006). |
| PAORL | Pilot Auction Ontario Power Generation Revenue Limit | For the period May 1, 2006 to April 30, 2007 PAORL is equal to \$51/ MWh. For the period May 1, 2007 to April 30, 2008 PAORL is equal to \$52/ MWh. For the period May 1, 2008 to April 30, 2009 PAORL is equal to \$53/ MWh. | N/A | The formula for calculating the OPG Rebate is subject to Ministerial Directive made under Order-in-Council 1062/2006 (May 17, 2006). |

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| PAP | Pilot Auction Price | The weighted average auction price in \$/MWh over each hour of the quarter realized for the PAA by Ontario Power Generation. | N/A | The formula for calculating the OPG Rebate is subject to Ministerial Directive made under Order-in-Council 1062/2006 (May 17, 2006). |
| $PB_{IM}_h^t$ | Price bias adjustment factor for import transactions | Price bias adjustment factor for import transactions in effect during <i>metering interval</i> 't' of <i>settlement hour</i> 'h'. | 9.3.8C.3 | Same as <i>IESO market rules</i> |
| $PB_{EX}_h^t$ | Price bias adjustment factor for export transactions | Price bias adjustment factor for export transactions in effect during <i>metering interval</i> 't' of <i>settlement hour</i> 'h'. | 9.3.8C.5 | Same as <i>IESO market rules</i> |
| $PD_{BE}_{k,h}^{i,t}$ | <i>Energy Offer</i> submitted into the Pre-dispatch | <i>Energy offers</i> submitted in Pre-dispatch, represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant</i> 'k' at <i>intertie metering point</i> 'i' during <i>metering interval</i> 't' of <i>settlement hour</i> 'h' arranged in ascending order by the offered price in each <i>price quantity pair</i> where offered prices 'P' are in column 1 and offered quantities 'Q' are in column 2. | 9.3.1.2D | Same as <i>IESO market rules</i> . |
| $PD_{BL}_{k,h}^{i,t}$ | <i>Energy Bid</i> submitted into the Pre-dispatch | <i>Energy bids</i> submitted in <i>pre-dispatch</i> , represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant</i> 'k' at <i>intertie metering point</i> 'i' during <i>metering interval</i> 't' of <i>settlement hour</i> 'h' arranged in ascending order by the offered price in each | 9.3.1.2D | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|--------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <i>price quantity pair</i> where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2. | | |
| $PD_DQSI_{k,h}^{i,t}$ | <i>Pre-dispatch</i> quantity scheduled for injection at an <i>intertie metering point</i> | <i>Pre-dispatch</i> constrained quantity scheduled for injection by <i>market participant ‘k’</i> at <i>intertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . | 9.3.1.2C | Same as <i>IESO market rules</i> |
| $PD_DQSW_{k,h}^{i,t}$ | <i>Pre-dispatch</i> quantity scheduled for withdrawal at an <i>intertie metering point</i> | <i>Pre-dispatch</i> constrained quantity scheduled for withdrawal by <i>market participant ‘k’</i> at <i>intertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . | 9.3.1.2C | Same as <i>IESO market rules</i> |
| $PD_ELMP_h^{m,t}$ | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the export zone | <i>Pre-dispatch</i> constrained schedule intertie price at the <i>delivery point ‘m’</i> of the sink for the export transaction during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . | 9.3.1.2C | Same as <i>IESO market rules</i> . |
| $PD_EMP_h^{m,t}$ | Pre-dispatch energy market price for Ontario | <i>Pre-dispatch</i> projected energy market price applicable to all <i>delivery points ‘m’</i> in the Ontario zone in <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . | 9.3.1.2C | Same as <i>IESO market rules</i> |
| $PD_ILMP_h^{m,t}$ | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the import zone | <i>Pre-dispatch</i> constrained schedule intertie price at the <i>delivery point ‘m’</i> of the source for the import transaction during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . | 9.3.1.2C | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|---------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $PDF_{k,m,d}$ | Peak Demand Factor | The Peak Demand Factor for Class A Market Participant or Distributor ‘k’ for month ‘m’ with effectiveness ratio ‘d’. | N/A – subject to regulation by the <i>Ontario Energy Board</i> | N/A – See regulations. |
| $PDR_BE_{k,h}^{i,t}$ | <i>Energy Offer submitted into the pre-dispatch of record</i> | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. <i>Energy offers submitted into the pre-dispatch of record, represented as an n by 2 matrix of price-quantity pairs for each market participant ‘k’ at intertie metering point ‘i’ during metering interval ‘t’ of settlement hour ‘h’ arranged in ascending order by the offered price in each price-quantity pair, where offered prices are in column 1 and offered quantities are in column 2.</i> | 9.3.1.2B | Same as <i>IESO market rules</i> |
| $PDR_DQSI_{k,h}^{i,t}$ | <i>Pre-dispatch of record dispatch quantity scheduled for injection at an intertie metering point</i> | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. <i>Pre-dispatch of record constrained quantity scheduled for injection by market participant ‘k’ for an import transaction at intertie metering point ‘i’ during metering interval ‘t’ of settlement hour ‘h’.</i> | 9.3.1.2A | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|---------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $PDR_DQSI_{k,h}^{m,t}$ | <i>Pre-dispatch of record</i> dispatch quantity scheduled for injection at a <i>delivery point</i> | EFFECTIVE OCTOBER 13, 2011, THIS VARIABLE IS NO LONGER USED IN THE CALCULATION OF ANY SETTLEMENT. <i>Pre-dispatch of record</i> constrained quantity scheduled for injection by <i>market participant</i> 'k' at <i>delivery point</i> 'm' during <i>metering interval</i> 't' of <i>settlement hour</i> 'h'. | 9.3.1.2A | Same as <i>IESO market rules</i> |
| $PGS_{h,M}$ | Allocated Quantity of Energy Withdrawn by OPG at Beck Pump Generating Station | Allocated quantity in MWh of <i>energy</i> withdrawn by OPG at Beck Pump Generating Station in <i>metering interval</i> 't' of <i>settlement hour</i> 'h' for month 'M'. | | |
| $PROR_{r,h}^{m,t}$ | 5-minute Operating Reserve Price | <i>Market price</i> in \$/MW of class <i>r</i> reserve in <i>metering interval</i> 't' of <i>settlement hour</i> 'h' at <i>RWM</i> 'm' or <i>intertie metering point</i> 'm'. | 9.3.1.4 | Same as <i>IESO market rules</i> . |
| $PST_{k,h}^{p,t}$ | Steam turbine portion from Daily Generator Data | The percentage of the <i>pseudo-unit</i> 's schedule that relates to the steam turbine in association with <i>offer k</i> for <i>market participant</i> 'k' at <i>pseudo unit</i> 'p' during <i>metering interval</i> 't' of <i>settlement hour</i> 'h'. | 7.2.2.2 | Same as <i>IESO market rules</i> . |
| PTS-L | Provincial Transmission Service Line Connection Service Rate (\$/KW) | Line Connection Transmission Tariff Service Rate in units of dollars per kilowatt. | N/A | Subject to the OEB "Ontario Transmission Rate Order". |

| Key to the Table Below | | | | |
|--------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| PTS-N | Provincial Transmission Service Network Service Rate (\$/KW) | Network Transmission Tariff Service Rate in units of dollars per kilowatt. | N/A | Subject to the OEB “Ontario Transmission Rate Order”. |
| PTS-T | Provincial Transmission Service Transformation Connection Service Rate (\$/KW) | Transformation Connection Service Transmission Tariff Rate in units of dollars per kilowatt. | N/A | Subject to the OEB “Ontario Transmission Rate Order”. |
| $QTR_{k,h}^{ij}$ | Quantity of Transmission Rights Owned | Quantity of TRs in MW assigned to <i>market participant ‘k’</i> for transmission from injection <i>TR zone ‘i’</i> to withdrawal <i>TR zone ‘j’</i> . | 9.3.1.8 and 8.4.2 | Same as <i>IESO market rules</i> . |
| RAC_k^m | Resource Available Capacity (MW) | <p>The available capacity (in MW) of <i>capacity auction resource at delivery point or intertie metering point ‘m’</i> for <i>capacity market participant ‘k’</i> in the applicable <i>obligation period</i>, and is determined in accordance with the following:</p> <p>For <i>capacity dispatchable load resources</i> and <i>hourly demand response resources</i>:</p> $RAC_k^m = \text{MIN}(DREBQ_{k,h}^m, (1.15 * CCO_{k,h}^m), CICAP_k^m, CARC_k^m)$ <p>Where:</p> | 9.3.1.10 | Same as <i>IESO market rules</i> |

| Key to the Table Below | | | | |
|--------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | <p>$CARC_k^m$ is only applicable to virtual <i>hourly demand response resources</i></p> <p>For <i>capacity generation resources, system-backed capacity import resources, generator-backed capacity import resources and capacity storage resources</i>:</p> $RAC_k^m = \text{MIN}(CAEO_{h,k}^m, (1.15 * CCO_{k,h}^m), CICAP_k^m)$ | | |
| RPP_l | Regulated Price Plan | A fixed <i>energy rate</i> for all <i>metering intervals</i> based on consumption level <i>l</i> . | N/A – subject to regulation by the <i>Ontario Energy Board</i> | N/A – See regulations. |
| $RPPVA_k$ | Total volume of electricity distributed to prescribed Class B consumers | The total volume of electricity distributed to Class B consumers whose rates are determined under subsection 79.16 (1) of the <i>Ontario Energy Board Act, 1998</i> during the month by licensed distributor ‘ <i>k</i> ’. | N/A | N/A – See regulations. |
| RQ | Reallocate Quantity | A quantity derived from a <i>physical bilateral contract quantity</i> ($BCQ_{k,b,h}^{m,t}$ or $BCQ_{s,k,h}^{m,t}$) in order to reallocate a component of <i>hourly uplift</i> from the <i>buying market participant</i> to the <i>selling market participant</i> in direct | N/A | See hourly uplift charge types in Section 2.2 |

| Key to the Table Below | | | | |
|--------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | proportion to the size of the <i>physical bilateral contract</i> . | | |
| $SQEI_{k,h}^{i,t}$ | Scheduled Quantity of Energy Injected at an <i>intertie metering point</i> | Scheduled quantity in MWh of <i>energy</i> injected by <i>market participant ‘k’</i> at <i>intertie metering point ‘i’</i> for each <i>metering interval ‘t’</i> in <i>settlement hour ‘h’</i> . | 9.3.1.9 | This variable is a sub-set of variable AQEI described in Section 3.1.9 of Chapter 9 of the <i>market rules</i> , specifically referring to those quantities derived from <i>interchange schedule data</i> . |
| $SQEW_{k,h}^{i,t}$ | Scheduled Quantity of Energy Withdrawn at an <i>intertie metering point</i> | Scheduled quantity in MWh of <i>energy</i> withdrawn by <i>market participant ‘k’</i> at <i>intertie metering point ‘i’</i> for each <i>metering interval ‘t’</i> in <i>settlement hour ‘h’</i> . | 9.3.1.9 | This variable is a subset of variable AQEW described in Section 3.1.9 of Chapter 9 of the <i>market rules</i> , specifically referring to those quantities derived from <i>interchange schedule data</i> . |
| $SQROR_{r,k,h}^{m,t}$ | Scheduled Quantity of class <i>r</i> Operating Reserve | Market Schedule quantity in MW of <i>class r</i> reserve for <i>market participant ‘k’</i> in <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> at <i>RWM ‘m’</i> . | 9.3.1.4 | Same as <i>IESO market rules</i> . |
| $TAOR_{k,h}^{m,t}$ | Total Accessible Operating Reserve | Quantity of operating reserve available from <i>market participant ‘k’</i> in <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> at <i>RWM ‘m’</i> . | 9.3.4.2 | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|--------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| $TCD_{k,h}^m$ | Transformation Connection Demand (KW) | Billing Demand for Transformation Connection Transmission Service (KW) for <i>transmission customer</i> 'k' at transmission delivery point m during <i>settlement hour</i> 'h' in which $TCD_{k,h}^m$ denotes the non-coincident peak demand for the month. | N/A | Subject to the OEB "Ontario Transmission Rate Order". |
| $TD_{k,h,c}$ | Total Market Settlement Amount | Total <i>settlement amount</i> (dollars) for the market used in <i>hourly uplift</i> and calculations for various other non-hourly <i>settlement amounts</i> for <i>market participant</i> 'k' or <i>transmission customer</i> 'k' during <i>settlement hour</i> 'h' with respect to <i>charge type</i> 'c'. | N/A | This is purely a notational term is used within the documentation to describe the aggregation of various <i>settlement amounts</i> . A summation across <i>charge type</i> 'c' denotes an aggregation of all <i>settlement amounts</i> for that <i>charge type</i> for the time period concerned. e.g.: \sum_c^T indicates a summation of all <i>settlement amounts</i> for <i>charge type</i> 'c' during all <i>metering intervals</i> 'T'. |
| TLQ | Threshold Load Quantity | A threshold (kWh) with respect to monthly consumption of regulated customers, set by the <i>OEB</i> . | N/A – subject to regulation by the <i>Ontario Energy Board</i> . | N/A – See regulations. |
| TP_c | Tariff price | A stipulated rate (\$/MWh, \$/KW) used in the calculation of a specific <i>charge type</i> 'c'. | N/A | This is purely a notational term is used within the documentation to describe the unique per MW or per MWh rate applied to specific |

| Key to the Table Below | | | | |
|--------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| | | | | quantities in order to calculate various <i>settlement amounts</i> . |
| TRMP | TR Market Clearing Price | The price of each <i>transmission right</i> in a single round of a <i>TR auction</i> . | 8.4.15 | Same as <i>IESO market rules</i> . |
| TRCAD | TR Clearing Account Disbursements | The total dollar value of all disbursements from the <i>TR clearing account</i> authorized by the <i>IESO Board</i> in the current <i>energy market billing period</i> . | 9.4.7.2 | Same as <i>IESO market rules</i> . |
| TRCAD _E | TR Clearing Account Disbursements for Exporters | The proportion of the total dollar value of all disbursements from the <i>TR clearing account</i> authorized by the <i>IESO Board</i> in the current <i>energy market billing period</i> allocated to exporters. | 9.4.7.2 | Same as <i>IESO market rules</i> . |
| TRCAD _L | TR Clearing Account Disbursements for Loads | The proportion of the total dollar value of all disbursements from the <i>TR clearing account</i> authorized by the <i>IESO Board</i> in the current <i>energy market billing period</i> allocated to loads. | 9.4.7.2 | Same as <i>IESO market rules</i> . |
| TRCAR | TR Shortfall Recovery Amount | The total dollar value of TR shortfall recovery from the <i>TR clearing account</i> authorized by the <i>IESO Board</i> in the current <i>energy market billing period</i> . | 9.4.7.2 | Same as <i>IESO market rules</i> . |

| Key to the Table Below | | | | |
|--------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|
| Variable used within Section 2 | Data Description | Description | Market Rules Reference | Relation to the corresponding variable description within the IESO Market Rules |
| U_k | Energy Storage Facility Injection | The total volume of <i>energy</i> (MWh) conveyed back into the <i>IESO-controlled grid</i> during the month by energy storage facilities associated with Class B <i>market participant</i> ‘k’ and the total volume of <i>energy</i> (MWh) conveyed back into the <i>distribution system</i> during the month by energy storage facilities that are Class B consumers of <i>distributor</i> ‘k’. | N/A | N/A – See regulations. |
| $X_h^{m,t}$ | Settlement Floor Price for exports | A <i>settlement floor price</i> for <i>energy</i> applicable to <i>intertie metering point</i> ‘m’ <i>metering interval</i> ‘t’ in <i>settlement hour</i> ‘h’ as set in the applicable <i>market manual</i> . The need for a <i>settlement floor price</i> other than <i>MMCP</i> shall remain in effect only until floor prices for <i>energy offers</i> from <i>registered market participants</i> that are <i>variable generators</i> or <i>nuclear generators</i> go into effect. | 9.3.1.3 | Same as <i>IESO market rules</i> |

2.2 Charge Types and Equations

The following table contains the *IESO charge types* and equations that are part of an active *IESO-administered market*.

Notice to Electricity Storage Participants – As of January 2021, substantial amendments to the *market rules* came into effect allowing for increased participation of *electricity storage participants* and *electricity storage facilities* in the *IESO-administered markets* and on the *IESO-controlled grid*. However, the *IESO* does not anticipate updating the *charge types* and equations set out in this Section 2.2, the variable descriptions set out in Section 2.1 above, or any other potentially affected parts of this document to reflect those *market rule* amendments until the *IESO*’s commercial reconciliation tools shall have been updated. Therefore, until such time, settlement programs, variable descriptions, *charge types* and equations will be applied to *electricity storage participants* and their *electricity storage facilities* as follows:

- (i) the relevant provisions of Market Manual 5: Settlements, Part 5.5: Physical Markets Settlement Statements and all other relevant *market manuals* have been updated to reflect the aforementioned *market rule* amendments with respect to settlements of transactions and other circumstances relating to *electricity storage participants* and *electricity storage facilities*, and;
- (ii) based on these updated provisions, the variable descriptions, *charge types* and equations set out in this document will, as appropriate, be applied to the settlement of all relevant transactions and other circumstances, subject to the making of any alterations to such variable descriptions, *charge types* and equations as may be necessary to properly apply them in respect of each such transaction or other circumstance.

| Key to the Table Below | |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Charge Type Number | The designation number for each <i>charge type</i> enumerated below – which correspond to the <i>charge type</i> numbers used on <i>settlement statements</i> and <i>invoices</i> . |
| Charge Type Name | The name of the <i>charge type</i> . |
| Settlement Amount Acronym | The abbreviated name of the variable used to describe the <i>settlement amount</i> within the <i>IESO market rules</i> . |

| Key to the Table Below | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Market Rules Reference | <p>The relevant reference to the variable in question within the <i>IESO market rules</i>. The format for each reference is: [Chapter] [Section number] For example: “Chapter 9 Section 3.1.6” would appear as: 9.3.1.6</p> |
| Equation | <p>The equation used by the <i>IESO settlements process</i> to calculate the <i>settlement amount</i> related to each <i>charge type</i>.</p> |
| Settlement Resolution | <p>The level of granularity by which the <i>IESO settlements process</i> calculates the <i>settlement amount</i> (for which the <i>charge type</i> is related), and provides the supporting data in the settlement data file.</p> <p>Where:</p> <ul style="list-style-type: none"> • “Interval” means that the calculations are performed on the basis of each relevant, 5-minute <i>metering interval</i>; • “Hourly” means that the calculations are performed on the basis of each <i>settlement hour</i>; • “Daily” means that the calculations are performed on the basis of each calendar day; • “Monthly” means that the calculations are performed on the basis of a calendar month (equivalent to a real-time market <i>billing period</i>); • “Quarterly” means that the calculations are performed on the basis of 3 month intervals; • “Yearly” means that the calculations are performed on the basis of a calendar year. |

| Key to the Table Below | |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cashflow | <p>This column indicates whether or not the <i>settlement amount</i> (for which the <i>charge type</i> is related) is:</p> <ul style="list-style-type: none"> • “Due IESO” – which means, owed to the IESO by the <i>market participant</i>; *** or • “Due MP” – which means, owed to the <i>market participant</i> by the IESO; *** or • “Either Way” – which indicates that the <i>settlement amount</i> in question could be either owed to the IESO by the <i>market participant</i> or owed to the <i>market participant</i> by the IESO in any given time period (according to the applicable “settlements resolution”). <p>***NOTE in cases where a Cashflow is designated as “Due IESO” or “Due MP” this should be read in the context of its intended use in the normal course of settlements. However, such cashflows can always be REVERSED in situations where an adjustment is applied to a market participant, or the application of a per-unit charge in order to offset an adjustment to another market participant.</p> |
| HST Tax Treatment within Ontario | <ul style="list-style-type: none"> • This column indicates the percentage levy as per the Harmonized Sales Tax (HST). • Zone used for Tax Basis is (ONZN) for Ontario. • The applicable Zone ID may be found in column 7 of the applicable settlement statement detail record (see also, the Technical Interface Document entitled, “Detail Field Description”). • A complete list of Zones may be found in the Technical Interface Document entitled, “Standing Data”. |
| HST Tax Treatment for U.S., Manitoba and Quebec Generation | <ul style="list-style-type: none"> • This column indicates the percentage levy as per the Harmonized Sales Tax (HST). • Zones used for Tax Basis are (NYSI) for US Generation, (MBSI) for Manitoba Generation and (PQSI) for Quebec Generation. • The applicable Zone ID may be found in column 7 of the applicable settlement statement detail record (see also, the Technical Interface Document entitled, “Detail Field Description”). • A complete list of Zones may be found in the Technical Interface Document entitled, “Standing Data”. |
| HST Tax Treatment for US Load | <ul style="list-style-type: none"> • This column indicates the percentage levy as per the Harmonized Sales Tax (HST). • Zone used for Tax Basis is (NYSI) for US Load. • The applicable Zone ID may be found in column 7 of the applicable settlement statement detail record (see also, the Technical Interface Document entitled, “Detail Field Description”). • A complete list of Zones may be found in the Technical Interface Document entitled, “Standing Data”. |

| Key to the Table Below | |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HST Tax Treatment for Manitoba and Quebec Load | <ul style="list-style-type: none"> • This column indicates the percentage levy as per the Harmonized Sales Tax (HST). • Zones used for Tax Basis are (MBSI) for Manitoba Load and (PQSI) for Quebec Load. • The applicable Zone ID may be found in column 7 of the applicable settlement statement detail record (see also, the Technical Interface Document entitled, “Detail Field Description”). • A complete list of Zones may be found in the Technical Interface Document entitled, “Standing Data”. |
| Effective Start Trading Day | <ul style="list-style-type: none"> • This column indicates the effective start <i>trading day</i> of the <i>charge type</i>. |
| Effective End Trading Day | <ul style="list-style-type: none"> • This column indicates the effective end <i>trading day</i> of the <i>charge type</i>. |
| Comments | <p>This column notes any <i>charge types</i> that are governed by various documentation other than the <i>IESO market rules</i> and additional details for “Effective Start Trading Day” and “Effective End Trading Day” columns, where applicable.</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| Financial Market Charge Types | | | | | | | | | | | | | |
| 52 | Transmission Rights Auction Settlement Debit | N/A | 8.4.17 | $QTR_{k,h}^{ij} \times TRMP$ | Daily | Due IESO | Exempt | Exempt | Exempt | Exempt | | | |
| Physical Market Charge Types | | | | | | | | | | | | | |
| 100 | Net Energy Market Settlement for Generators and Dispatchable Load | NEMSC _{k,h} | 9.3.3.2 | <p>For <i>dispatchable facilities</i> or an <i>intertie metering point</i> associated with:</p> <ul style="list-style-type: none"> i) An <i>injecting boundary entity</i>; ii) A <i>withdrawing boundary entity</i> where the associated <i>intertie congestion price</i> is less than zero; iii) A <i>withdrawing boundary entity</i> conducting a wheeling through transaction that is linked as per Chapter 7, section 3.5.82 of the <i>market rules</i> $\sum_{t,M} (EMP_h^{m,t} \times ((AQEI_{k,h}^{m,t} + SQEI_h^i - AQEW_{k,h}^{m,t} - SQEW_h^i))$ | Interval | Either Way | 13 | 13 | 0 | 13 | May 1, 2002 | April 30, 2023 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $+\sum_{s,b}(BCQ_{s,k,h}^{m,t}-BCQ_{k,b,h}^{m,t}))$ For an <i>intertie metering point</i> associated with a withdrawing <i>boundary entity</i> where that <i>intertie congestion price</i> is not less than zero: $\sum_{t,M}((MAX(X_h^{m,t}, EMP_h^{m,t}) \times AQEI_{k,h}^{m,t}))$ | | | | | | | | | |
| 101 | Net Energy Market Settlement for Non-dispatchable Load | NEMSC _{k,h} | 9.3 | $HOEP_h \times \sum_{t,m}(AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t} + \sum_s BCQ_{s,k,h}^{m,t} - \sum_{n,b,t}(EMP_h^{m,t} BCQ_{k,b,h}^{n,t}))$ | Hourly | Either Way | 13 | N/A | N/A | N/A | May 1, 2002 | April 30, 2023 | |
| 102 | TR Clearing Account Credit | TRCAC _k | 9.4.7.2 | <p>For loads:</p> $TRCAC_k = TRCAD_L \times \sum_H^{M,T} [(AQEW_{k,h}^{m,t}) / \sum_{K,H}^{M,T} (AQEW_{k,h}^{m,t})]$ <p>For exporters:</p> $TRCAC_k = TRCAD_E \times \sum_H^{I,T} [(SQEW_{k,h}^{i,t}) / \sum_{K,H}^{I,T} (SQEW_{k,h}^{i,t})]$ <p>Where</p> $TRCAD_L = (\sum_K TD_C / \sum_K TD_{C,C1}) \times TRCAD$ $TRCAD_{TRCAD_E} = (\sum_K TD_{C1} / \sum_K TD_{C,C1}) \times TRCAD$ Where ‘C’ is the set of all <i>monthly service charge types c</i> as follows: 650,651,652. | Monthly (when applicable) | Due MP | 13 | N/A | 0 | 13 | | | The <i>billing period</i> is defined in Market Manual 5.5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.27 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where 'C' is the set of all <i>monthly export transmission charge types c as follows: 653.</i></p> <p>Where 'H' is the set of all <i>settlement hours 'h' in the billing periods immediately preceding the current billing period, as determined by IESO Board.</i></p> <p>Where 'T' is the set of all <i>metering intervals 't' in the set of all settlement hours 'H'.</i></p> <p>Where 'M' is the set of all <i>delivery points 'm', excluding any inertia metering points.</i></p> <p>Where 'I' is the set of all <i>inertia metering points 'i'.</i></p> <p>Where 'K' is the set of all <i>market participants 'k'.</i></p> | | | | | | | | | |
| 103 | Transmission Charge Reduction Fund | TCRF _h | 9.3.6.2 and 8.4.18 | $(\sum_{t,m} (EMP_h^{m,t} - EMP_h^{REF,t}) \times \sum_k (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} - AQEI_{k,h}^{m,t} - SQEI_{k,h}^{i,t}) - \sum_k TRSC_{k,h})$ | Hourly | Accumulates in the TR Clearing Account | N/A | N/A | N/A | N/A | | | See IESO market rules, Chapter 8 Section 4.18 for further details. |
| 104 | Transmission Rights Settlement Credit | TRSC _{k,h} | 9.3.6.1 | $\text{MAX}((0), (\sum_{j,i} 1/12 \times QTR_{k,h}^{i,j} \times \sum_t (EMP_h^{j,t} - EMP_h^{i,t})))$ | Hourly | Due MP | 0 | 0 | 0 | 0 | | | |
| 105 | Congestion Management Settlement Credit for Energy | CMSC _{k,h} | 9.3.5.2 to 9.3.5.7 | $\text{OP}(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE) - \text{MAX}(\text{OP}(EMP_h^{m,t}, DQSI_{k,h}^{m,t}, BE), \text{OP}(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE))$ <p>Subject to the mathematical sign of (DQSI-MQSI) being equal to the mathematical sign of (AQEI-MQSI).</p> | Interval | Either Way | 13 | 13 | 13 | 13 | | | This charge type holds the market participant to the expected profits implied by the market schedule derived on dispatch data provided by that |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>$AQEI_{k,h}^{m,t}$ and $EMP_h^{m,t}$ may be substituted with $SQEI_{k,h}^{i,t}$ and $EMP_h^{i,t}$ respectively, where the application of this equation pertains to <i>intertie metering point 'i'</i>.</p> <p>or</p> <p>$-1OP(EMP_h^{m,t}, MQSW_{k,h}^{m,t}, BL) - MA(-1OP(EMP_h^{m,t}, DQSW_{k,h}^{m,t}, BL), -1OP(EMP_h^{m,t}, AQEW_{k,h}^{m,t}, BL))$</p> <p>Subject to the mathematical sign of (DQSW-MQSW) being equal to the mathematical sign of (AQEW-MQSW). $AQEW_{k,h}^{m,t}$ and $EMP_h^{m,t}$ may be substituted with $SQEW_{k,h}^{i,t}$ and $EMP_h^{i,t}$ respectively, where the application of this equation pertains to <i>intertie metering point 'i'</i>.</p> <p>or</p> <p>For <i>variable generators</i> that are registered <i>market participants</i> whose <i>registered facility</i> is operating under a release notification for any given <i>dispatch interval</i>, and the <i>facility's</i> market schedule quantity is less than the corresponding quantity in the</p> | | | | | | | | | | <p><i>market participant.</i></p> <p>Offer prices in matrix 'BE' may be revised down to a lower limit as described in 9.3.5.6. See also: description of variable 'BE' in Section 2.2.</p> <p>The bid prices in the matrix BL may be revised as described in Market Manual 5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.8.</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>constrained schedule for the same dispatch interval as a result of the <i>market participant's</i> offers being partially or fully uneconomic:</p> $\text{OPE}(\text{EMP}_h^{m,t}, \text{MQSI}_{k,h}^{m,t}, \text{BE}) - \text{OP}(\text{EMP}_h^{m,t}, \text{AQEI}_{k,h}^{m,t}, \text{BE})$ <p>See 9.3.5.2 for the definition of the Operating Profit (OP) function referenced above.</p> | | | | | | | | | |
| 106 | Congestion Management Settlement Credit for 10 Minute Spinning Reserve | CMSC _{r,k,h} | 9.3.5.2 | $\text{OP}(\text{PROR}_{r,h}^{m,t}, \text{SQOR}_{r,k,h}^{m,t}, \text{BR}_r) - \text{MAX}(\text{OP}(\text{PROR}_{r,h}^{m,t}, \text{DQSR}_{r,k,h}^{m,t}, \text{BR}_r), \text{OP}(\text{PROR}_{r,h}^{m,t}, \text{AQOR}_{r,k,h}^{m,t}, \text{BR}_r))$ <p>See 9.3.5.2 for the definition of the Operating Profit (OP) function referenced above.</p> | Interval | Either Way | 13 | N/A | N/A | N/A | | | This charge type holds the market participant to the expected profits implied by the market schedule derived on dispatch data provided by that market participant. |
| 107 | Congestion Management Settlement Credit for 10 Minute Non-spinning Reserve | CMSC _{r,k,h} | 9.3.5.2 | $\text{OP}(\text{PROR}_{r,h}^{m,t}, \text{SQOR}_{r,k,h}^{m,t}, \text{BR}_r) - \text{MAX}(\text{OP}(\text{PROR}_{r,h}^{m,t}, \text{DQSR}_{r,k,h}^{m,t}, \text{BR}_r), \text{OP}(\text{PROR}_{r,h}^{m,t}, \text{AQOR}_{r,k,h}^{m,t}, \text{BR}_r))$ <p>See 9.3.5.2 for the definition of the Operating Profit (OP) function referenced above.</p> | Interval | Either Way | 13 | N/A | N/A | N/A | | | This charge type holds the market participant to the expected profits implied by the market schedule derived on dispatch data provided by that |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | | | | | | | | | | market participant. |
| 108 | Congestion Management Settlement Credit for 30 Minute Operating Reserve | CMSC _{r,k,h} | 9.3.5.2 | $OP(\text{PROR}_{r,h}^{m,t}, \text{SQOR}_{r,k,h}^{m,t}, \text{BR}_r) - \text{MAX}(OP(\text{PROR}_{r,h}^{m,t}, \text{DQSR}_{r,k,h}^{m,t}, \text{B}), OP(\text{PROR}_{r,h}^{m,t}, \text{AQOR}_{r,k,h}^{m,t}, \text{BR}_r))$ See 9.3.5.2 for the definition of the Operating Profit (OP) function referenced above. | Interval | Either way | 13 | N/A | N/A | N/A | | | This charge type holds the market participant to the expected profits implied by the market schedule derived on dispatch data provided by that market participant. |
| 111 | Northern Pulp and Paper Mill Electricity Transition Program Settlement Amount | N/A | N/A | $= \sum_{M H}^T (\text{AQEW}_{mh}^t) \times (\text{Tprate})$ Where: Tprate is the transition program rate ‘M’ is the set of all <i>delivery points</i> ‘m’ for all <i>market participant-eligible facilities</i> . ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the settlement period. ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> 5 H’. | Quarterly | Due MP | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to Ministry of Natural Resources specifications. This program ends on September 30, 2010. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 'AQEW' is limited to a maximum of 1,000,000 MWh annually per eligible market participant. | | | | | | | | | |
| 112 | Ontario Power Generation Rebate | N/A | N/A | <p>** CALCULATIONS FOR CHARGE TYPE 112 END April 30, 2009 **</p> $= TD_{162} \times [(AQEW_{k,h}^t) / \sum_{K,H}^T (AQEW_{k,h}^t)]$ <p>Where: 'K' is the set of all Ontario market participants 'k' 'H' is the set of all settlement hours 'h' in the applicable quarter. 'T' is the set of all metering intervals 't' in the set of all settlement hours 'H'.</p> | May 1, 2006 to April 30, 2009 | Due MP | 13 | N/A | N/A | N/A | | | The Ontario Power Generation Rebate payments will be based on the allocated quantity of energy withdrawn for the applicable quarter. |
| 113 | Additional Compensation for Administrative Pricing Credit | N/A | 7.8.4A.16 or 7.8.4A.10 or 7.13.6.2 | Manual Entry as per 7.8.4A.16, or 7.8.4A.10, or 7.13.6.2. | Monthly | Due MP | 13 | 13 | 0 | 13 | | | This charge will still be used for market suspension events |
| 114 | Outage Cancellation/Deferral Settlement Credit. | N/A | 5.6.7.4 | Manual Entry as per 5.6.7.4. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 115 | Unrecoverable Testing Costs Credit | N/A | 9.4.8.1.1 and 4.5.3.4 | Manual Entry as per 4.5.3.4. | Monthly | Due MP | 13 | 13 | 13 | 13 | | | |
| 116 | Tieline Maintenance Reliability Credit | N/A | 9.4.8.1.2 and 5.5.3.4 | Manual Entry as per 5.5.3.4. | Monthly | Due MP | 13 | 13 | 13 | 13 | | | |
| 118 | Emergency Energy Rebate | N/A | 9.4.8.2 and 5.4.4A.1 | $= \sum_{H,c}^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | Monthly | Due MP | 13 | N/A | 0 | 13 | | | |
| 119 | Station Service Reimbursement Credit | N/A | 9.4.8.1.6 and 9.2.1A.9 - 2.1A14 | $= \{TD_{C,k,h}^{m,T} \times [\sum^{T2} (AQEW_{k,h}^{M,t}) / \sum_{k,h}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\} + \{TD_{C2,k,H}^{m,T} \times [\sum_{H2}^{T2} (AQEW_{k,h}^{M,t}) / \sum_{k,H}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\} + \{TD_{C3,k,H}^{m,T} \times [\sum_{H4}^{T2} (AQEW_{k,h}^{M,t}) / \sum_{k,H3}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\}$ <p>Where: ‘T’ is the set of all <i>metering intervals</i> in <i>settlement hour</i> ‘h’.</p> | Monthly | Due MP | 13 | N/A | N/A | N/A | June 1, 2002 | April 30, 2023 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>‘M’ is the eligible generation station service delivery point ‘m’ of market participant ‘k’</p> <p>‘C’ is the set of the following hourly uplift <i>charge type c</i> as follows: 150, 155, 250, 252, 254, 451</p> <p>‘T2’ is the set of all <i>metering intervals</i> in <i>settlement hour ‘h’</i> where the eligible <i>generation facility</i> was a net injector of <i>energy</i> into the <i>IESO-controlled grid</i>.</p> <p>‘K’ is the set of all <i>market participants</i></p> <p>‘C2’ is the set of the following non-hourly monthly <i>charge type ‘c’</i> as follows: 163,164,165,166,167,168,169,183, 184,450,452,454,460,550,1188, 1650</p> <p>‘C3’ is the set of the following daily <i>charge type ‘c’</i> as follows: 1550, 1560</p> <p>‘H’ is the set of all <i>settlement hours ‘h’</i> in the <i>billing period</i></p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘H2’ is the set of all <i>settlement hours</i> ‘h’ in the <i>billing period</i> where the eligible <i>generation facility</i> was a net injector of <i>energy</i> into the <i>IESO-controlled grid</i>.</p> <p>‘H3’ is the set of all <i>settlement hours</i> ‘h’ in the day</p> <p>‘H4’ is the set of all <i>settlement hours</i> ‘h’ in the day where the eligible <i>generation facility</i> was a net injector of <i>energy</i> into the <i>IESO-controlled grid</i>.</p> | | | | | | | | | |
| 119 | Station Service Reimbursement Credit | N/A | 9.4.8.1.6 and 9.2.1A.9 - 2.1A14 | $= \{TD_{C,k,h}^{m,T} \times [\sum_{T^2} (AQEW_{k,h}^{M,t}) / \sum_{K,h}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\} + \{TD_{C2,k,H}^{m,T} \times [\sum_{H2}^{T^2} (AQEW_{k,h}^{M,t}) / \sum_{K,H}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\} + \{TD_{C3,k,H}^{m,T} \times [\sum_{H4}^{T^2} (AQEW_{k,h}^{M,t}) / \sum_{K,H3}^T (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]\}$ <p>Where:</p> <p>‘T’ is the set of all <i>metering intervals</i> in <i>settlement hour</i> ‘h’.</p> <p>‘M’ is the eligible generation station service delivery point ‘m’ of market participant ‘k’</p> | Monthly | Due MP | 13 | N/A | N/A | N/A | May 1, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘C’ is the set of the following hourly uplift <i>charge type c</i> as follows: 150, 155, 186, 250, 252, 254, 451</p> <p>‘T2’ is the set of all <i>metering intervals</i> in <i>settlement hour ‘h’</i> where the eligible <i>generation facility</i> was a net injector of <i>energy</i> into the <i>IESO-controlled grid</i>.</p> <p>‘K’ is the set of all <i>market participants</i></p> <p>‘C2’ is the set of the following non-hourly monthly <i>charge type ‘c’</i> as follows: 102, 163,164,165,166,167,168,170, 183, 184,450,452,454,460,550,1188, 1650, 9920</p> <p>‘C3’ is the set of the following daily <i>charge type ‘c’</i> as follows: 1550, 1560</p> <p>‘H’ is the set of all <i>settlement hours ‘h’</i> in the <i>billing period</i></p> <p>‘H2’ is the set of all <i>settlement hours ‘h’</i> in the <i>billing period</i> where the eligible <i>generation facility</i> was a net</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | injector of <i>energy</i> into the <i>IESO-controlled grid</i> . ‘H3’ is the set of all <i>settlement hours</i> ‘h’ in the day ‘H4’ is the set of all <i>settlement hours</i> ‘h’ in the day where the eligible <i>generation facility</i> was a net injector of <i>energy</i> into the <i>IESO-controlled grid</i> . | | | | | | | | | |
| 120 | Local Market Power Debit | N/A | 9.4.8.2.2 and Ch. 7, Appendix 7.6 | | Monthly | Due IESO | 13 | 13 | 0 | 13 | | | |
| 121 | Northern Industrial Electricity Rate Program Settlement Amount | N/A | N/A | $= \sum_{M H}^T (AQEW_{mh}^t) \times (\text{Rate})$ Where: Rate is the program rate ‘M’ is the set of all <i>delivery points</i> ‘m’ for all <i>market participant-eligible facilities</i> . ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the settlement period. ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | Quarterly | Due MP | 0 | N/A | N/A | N/A | July 31, 2011 | April 30, 2022 | Eligibility, rates, and other implementation details subject to Ministry of Northern Development, Mines, Natural Resources and Forestry specifications. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 121 | Northern Energy Advantage Program Settlement Amount | N/A | N/A | $= \sum_{M H}^T (AQEW_{mh}^t) \times (\text{Rate})$ Where: Rate is the program rate ‘M’ is the set of all <i>delivery points</i> ‘m’ for all <i>market participant-eligible facilities</i> . ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the settlement period. ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | Quarterly | Due MP | 0 | N/A | N/A | N/A | July 31, 2022 | | Eligibility, rates, and other implementation details subject to Ministry of Northern Development, Mines, Natural Resources and Forestry specifications. |
| 122 | Ramp Down Settlement Amount | RDSA _{k,h} | 9.3.5A.1 | Let ‘BE’ be a matrix of n <i>price-quantity pairs</i> offered by <i>market participant</i> ‘k’ to supply <i>energy</i> during the <i>settlement hour</i> immediately before the hour in which ramp-down begins, adjusted by a ramp-down factor (RDF) as specified in the applicable <i>market manual</i> . Let OP(P,Q,B) be a function of Price (P), Quantity (Q) and an n × 2 matrix (B) of offered <i>price-quantity pairs</i> : $OP(P,Q,B) = P \cdot Q - \sum_{i=1}^{S^*} P_i \cdot (Q_i - Q_{i-1}) - (Q - Q_{S^*}) \cdot P_{S^*+1}$ | Interval | Either Way | 13 | N/A | N/A | N/A | | | The RDF is defined in Market Manual 5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.31. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>Where:</p> <p>s^* is the highest indexed row of BE such that $Q_{s^*} \leq Q \leq Q_n$ and where, $Q_0 = 0$</p> <p>Using the terms below, let $RDC_{k,h}^{m,t}$ be expressed as follows:</p> $RDC_{k,h}^{m,t} = \text{MAX}[0, [\text{OP}(\text{EMP}_h^{m,t}, \text{MQSI}_{k,h}^{m,t}, \text{BE}) - \text{MAX}(\text{OP}(\text{EMP}_h^{m,t}, \text{DQSI}_{k,h}^{m,t}, \text{BE}), \text{OP}(\text{EMP}_h^{m,t}, \text{AQEI}_{k,h}^{m,t}, \text{BE}))]]]$ $RDSA_{k,h}^{m,t} = \text{MIN}(-1 \times RDCB_{k,h}^{m,t}, RDC_{k,h}^{m,t})$ | | | | | | | | | | |
| 123 | MACD Enforcement Activity Amount | N/A | N/A | Manual entry based on the values submitted by MACD | Monthly | Due MP | 13 | N/A | N/A | N/A | | | | |
| 124 | SEAL Congestion Management Settlement Credit Amount | N/A | N/A | Manual entry based on the values submitted by MACD | Monthly | Due MP | 13 | 13 | 13 | 13 | | | | |
| 130 | Intertie Offer Guarantee Settlement Credit – Energy | $\text{IOG}_{k,h}$ and $\text{IOG}_{k,h}^{\text{OFF}}$ | 9.3.8A.1 9.3.8A.3 and 7.3.5.8.1 | **CALCULATIONS FOR CHARGE TYPE 130 END OCTOBER 12, 2011. CHARGE TYPE 130 REPLACED BY | Hourly (the IOG Offset is debited) | Either Way | N/A | 13 | 13 | 13 | | | Compensation for cumulative, hourly financial losses as implied by the market schedule for Imports of | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><u>CHARGE TYPE 1131 EFFECTIVE OCTOBER 13, 2011.</u></p> <p>The Intertie Offer Guarantee <i>settlement amount</i> is derived from an hourly <i>Energy</i> Import sub component ($EIM_{k,h}$) as follows:</p> $\sum_I (-1) \text{MIN}[0, \sum^T \text{OP}(\text{EMP}_h^{i,t}, \text{MQSI}_{k,h}^{i,t}, \text{BE})]$ <p>See 9.3.8A.2 for the definition of the Operating Profit (OP) function referenced above.</p> <p>Where ‘I’ is the set of relevant <i>intertie metering points</i> ‘i’.</p> <p>Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>The IOG_OFFSET component of this <i>charge type</i> applied on a monthly basis and is calculated as follows:</p> $= \text{DA_IOG}_{k,h} + \text{EIM}_{k,h} - \sum^I (-1) * \text{MIN}[0, \sum^T \text{OP}(\text{EMP}_h^{i,t}, \text{QSI}\{\text{adj}\}_{k,h}^{i,t}, \text{BE}_{k,h}^{i,t} \text{ or } \text{PDR_BE}_{k,h}^{i,t}) + \sum^T \text{QSI}\{\text{adj}\}_{k,h}^{i,t}] * \text{MI}_{k,h}^t[n,1] * \text{OPE}'_{k,h}^i]$ | | | | | | | | | <p><i>energy at an intertie metering point.</i></p> <p>This amount is reduced by the IOG Offset when the import is part of an implied “wheeling through” transaction as described in Section 3.5.8.1 of Chapter 7.</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | (See 9.3.8A.4 for the derivation of the variable $QSI\{adj\}_{k,h}^{i,t}$, $OPE'_{k,h}^i$ and the proper context of the matrix notation $MI_{k,h}^t[n,1]$ used above). | | | | | | | | | |
| 133 | Generation Cost Guarantee Payment | N/A | 9.4.7B | <p><u>Dispatchable delivery points:</u></p> $MAX[0, (CGC + RT_COST - \sum^T EMP_h^{m,t} \times AQEI\{limited\}_{k,h}^{m,t} - \sum^T CMSC_REV_{k,h}^{m,t})]$ <p>Subject to: $AQEI\{limited\}_{k,h}^{m,t} = MIN[AQEI_{k,h}^{m,t}$, <i>minimum loading point</i>]</p> <p>Where ‘CGC’ is a <i>Submitted Combined Guaranteed Costs</i> variable, assessed in accordance with the applicable <i>market manual</i> (see also Section 2.1 “Variable Description”).</p> <p>Where ‘m’ is <i>delivery point</i> ‘m’ at which the <i>generation unit</i> incurring the relevant costs is located.</p> <p>Where ‘T’ is a set of <i>metering intervals</i> ‘t’ from a valid start time until the earlier of:</p> | Hourly | MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <ul style="list-style-type: none"> - the end of minimum generation block run-time; or - the end of the unit's <i>minimum run-time</i>. <p>Where $AQEI\{limited\}_{k,h}^{m,t}$ shall denote all allocated quantities in MWh of <i>energy</i> injected at <i>delivery point</i> 'm' irrespective of any submission of <i>physical allocation data</i> by <i>market participant</i> 'k' in metering interval 't' of <i>settlement hour</i> 'h', up to the <i>generation unit's minimum loading point</i>.</p> <p>Where RT_COST is fuel and O&M cost component related to operation of the <i>generation unit</i> at its <i>minimum loading point</i> during its <i>minimum generation block run-time</i> (these costs are calculated based on the <i>offer price</i> associated with real-time dispatch).</p> $RT_COST_k = \sum^{T^*} H1_COST(AQEI\{limited\}_{k,h}^{m,t}, BE)$ <p>A. Where the COST function is defined as follows:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $\text{COST}(Q, B) = \sum_{i=1}^{s^*} P_i \cdot (Q_i - Q_{i-1})$ <p>where:</p> <ul style="list-style-type: none"> B is the $n \times 2$ matrix (B) of offered <i>price-quantity pairs</i> (P_i, Q_i) s^* is the highest indexed row of B such that $Q_{s^*-1} \leq Q \leq Q_{s^*}$ and where $Q_0 = 0$ <p>B. Where ‘H1’ is the set of all settlement hours ‘h’ during the period from beginning of the <i>minimum generation block run-time</i> until the end of the calculated <i>minimum run time</i>. We consider that the <i>minimum generation block run-time</i> starts with the first hour after we add the submitted number of ramp intervals to the valid start-up hour.</p> <p>C. Where ‘T*’ is the set of <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H1’</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where $CMSC_REV_{k,h}^{m,t}$ is any real-time $CMSC(TD_{k,h,105}^{m,t})$ payment associated with allocated quantities in MWh of <i>energy</i> injected at <i>delivery point</i> 'm' irrespective of any submission of <i>physical allocation data</i> by <i>market participant</i> 'k' in metering interval 't' of <i>settlement hour</i> 'h' up to the <i>generation unit's minimum loading point</i>.</p> <p>$CMSC_REV$ is calculated using the following rules:</p> <ol style="list-style-type: none"> (1) Real-time $CMSC(TD_{k,h,105}^{m,t})$ for the same interval is greater than zero. (2) If $MQSI_{k,h}^{m,t}$ and $\max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) \geq M$, then $CMSC_REV_{k,h}^{m,t} = 0$. (3) In the case of a <i>constrained-off event</i>: <ol style="list-style-type: none"> a. If $MQSI_{k,h}^{m,t} < MLP$, then $CMSC_REV_{k,h}^{m,t} = TD_{k,h,105}^{m,t}$ b. If $MQSI_{k,h}^{m,t} \geq MLP$ and $\max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) \leq MLP$, then $CMSC_REV_{k,h}^{m,t} = OP(EMP_h^{m,t}, MLP, BE)$ | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $- OP(EMP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), BE).$ <p>(4) In the case of a <i>constrained-on event</i>:</p> <p>a. If $MQSI_{k,h}^{m,t} < MLP$ and $\min(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) < MLP$, then $CMSC_REV_{k,h}^{m,t} = TD_{k,h,105}^{m,t}$</p> <p>b. If $MQSI_{k,h}^{m,t} \leq MLP$ and $\min(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) \geq MLP$, then $CMSC_REV_{k,h}^{m,t} = OP(EMP_{h}^{m,t}, MQSI_{k,h}^{m,t}, BE) - OP(EMP_{h}^{m,t}, MLP, BE)$</p> <p>(See applicable <i>market manual</i>)</p> | | | | | | | | | |
| 134 | Demand Response Credit | N/A | 9.4.7C 9.4.7F | <p>Manual Entry for TDRP (Refer to “Market Manual 5: Settlements, Part 5.10: Transitional Demand Response Program”).</p> <p>Manual Entry for ELRP (Refer to “Market Manual 10: Emergency Load Reduction Program (ELRP)”).</p> | Monthly | Either way | 13 | N/A | NA | N/A | | | TDRP and ELRP suspended by the IESO. |
| 135 | Real-time Import Failure Charge | RT_IFC _{k,h} | 9.3.8C.3 | $\sum^{l,T} (-1)^* \text{MIN}[\text{MAX}[0, (EMP^{m,t} + PB \text{ IM}^t - PD \text{ EMP}^{m,t})]$ | Hourly | Due IESO | N/A | 13 | N/A | N/A | | | Subject to exemptions under the provisions of 9.3.8C.2.2. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $RT_ISD_{k,h}^{i,t}]$ Where: 'I' is the set of all <i>intertie metering points</i> 'i'. 'T' is the set of 12 <i>metering intervals</i> 't' during <i>settlement hour</i> 'h'. $RT_ISD_{k,h}^{i,t} = \text{MAX} (PD_DQSI_{k,h}^{i,t} - DQSI_{k,h}^{i,t}, 0)$ | | | | | | | | | |
| 136 | Real-time Export Failure Charge | RT_EFC _{k,h} | 9.3.8C.5 | $\sum^{I,T} (-1) * \text{MIN} [\text{MAX} [0, (PD_EMP_h^{m,t} - EMP_h^{m,t} - PB_EX_h^t) * RT_ESD_{k,h}^{i,t}], (\text{MAX}(0, PD_EMP_h^{m,t}) * RT_ESD_{k,h}^{i,t})]$ Where: 'I' is the set of all <i>intertie metering points</i> 'i' 'T' is the set of 12 <i>metering intervals</i> 't' during <i>settlement hour</i> 'h' $RT_ESD_{k,h}^{i,t} = \text{MAX} (PD_DQSW_{k,h}^{i,t} - DQSW_{k,h}^{i,t}, 0)$ | Hourly | Due IESO | N/A | N/A | 0 | 13 | | | Subject to exemptions under the provisions of 9.3.8C.4.2. |
| 137 | Generation Cost Guarantee – Annual Carbon Charge Settlement Amount | N/A | 9.4.7B.1.2 7.2.2B | Manual entry based on the calculations outlined in Market Manual 4: Market Operations Part 4.6: Real-Time Generation Cost | Monthly | Due MP | 13 | N/A | N/A | N/A | June 7, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Guarantee Program, section 5.4 Fuel Cost Recovery Methodology. | | | | | | | | | |
| 140 | Fixed Energy Rate Settlement Amount | N/A | N/A | <p>** CHARGE TYPE 140 REPLACED BY CHARGE TYPE 142 EFFECTIVE JANUARY 1, 2005 **</p> <p>NOTE: The equations identified below apply to low volume and designated consumers (as defined in <i>Ontario Energy Board Act, 1998</i> and associated regulations) in the <i>IESO-administered market</i>. For <i>distributors</i>, charge type 140 is applied once a month based on the values submitted by the <i>distributor</i> on IMO_FORM_1562 (monthly adjustment) and IMO_FORM_1505 (May-Nov 2002 refund).</p> <p>For <i>IESO's</i> low volume and designated customers a fixed rate adjustment with a rate of 5.5 cents per kWh is applied on an interval basis using the equation below.</p> <p>A manual adjustment is applied at the end of the month to apply a rate of 4.7 cents per kWh for <i>energy</i> withdrawn up to 750 kWhs.</p> <p>Fixed Energy Rate Settlement Amount (dispatchable locations):</p> <p>Where net uncovered consumption > 0:</p> $\sum_{T,m} (EMP_h^{m,t} - FP_h^m) \times (AQEW_{k,h}^{m,t} - AQEI_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t})$ <p>Where net uncovered consumption = 0:</p> | Hourly (type 'DP' records only). See: "Format Spec. for Settlement Statement Files and Data Files" for further details) | Either Way | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $\sum_{T,m} (EMP_h^{m,t} - FP_h^m) \times (-AQEI_{k,h}^{m,t})$ <p>SUBJECT TO: Net uncovered consumption = $\text{MAX}[\sum_{T,m} (AQEW_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t}), 0]$</p> <p>Fixed Energy Rate Settlement Amount (non-dispatchable locations):</p> <p>Where net uncovered consumption > 0:</p> $(HOEP_h - FP_h^m) \times \sum_{m,T} (AQEW_{k,h}^{m,t} - AQEI_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t})$ <p>Where net uncovered consumption = 0:</p> $(HOEP_h - FP_h^m) \times \sum_{m,T} (-AQEI_{k,h}^{m,t})$ <p>SUBJECT TO: Net uncovered consumption = $\text{MAX}[\sum_{T,m} (AQEW_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t}), 0]$</p> <p>SUBJECT TO: Net uncovered consumption = $\text{MAX}[\sum_{T,m} (AQEW_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t}), 0]$</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 141 | Fixed Wholesale Charge Rate Settlement Amount | N/A | N/A | <p>** CALCULATIONS FOR CHARGE TYPE 141 END MARCH 31, 2005 **</p> <p>NOTE: The equations identified below apply to <i>distributors</i>, low volume and designated consumers (as defined in Bill 4 and associated regulations) in the <i>IESO-administered market</i>. For <i>distributors</i> an additional <i>charge type</i> 141 record is provided to reflect any monthly submission of IMO_FORM_1562. See IMO_FORM_1562 for further details.</p> $TD_{k,C} - \sum_{M,H} AQEW_{k,h}^{m,t} * (FPC)$ <p>Where: ‘H’ is all <i>settlement hours</i> ‘h’ during the <i>billing period</i>; and, ‘C’ is a designated group of <i>charge types</i> ‘c’ prescribed by government regulation (and associated rulings by the <i>Ontario Energy Board</i>) and consisting of the cumulative sum of the following <i>charge types</i>: 150, 155, 168, 170, 182, 183, 184, 250, 252, 254, 450, 452, 454, 550, 753, 9990</p> | Monthly | Either Way | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |
| 142 | Regulated Price Plan Settlement Amount | N/A | N/A | <p>NOTE: The equation identified below applies to low volume and designated consumers (as defined in</p> | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | May 1, 2023 | | Eligibility, rates, and other implementation details subject to |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>Ontario Energy Board Act, 1998</i> and associated regulations) in the <i>IESO-administered market</i>. For <i>distributors</i>, charge type 142 is applied once a month based on the values submitted by the <i>distributor</i> via On-line settlement forms: “Tiered Regulated Price Plan for Conventional Meters vs. Market Price Variance”, “Standard TOU Regulated Price Plan for Smart Meters vs. Market Price Variance”, “ULO Regulated Price Plan for Smart Meters vs. Market Price Variance” and “Regulated Price Plan – Final Variance Settlement Amount”.</p> <p>Tiered Regulated Price Plan Amount:</p> $NEMSC_{k,H} - \{ \text{MIN} [\text{TLQ} , \sum_H^{M,T} (AQEW_{k,h}^{m,t} - AQEI_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t})] \times RPP_{I=1} + \text{MAX} [0, \sum_H^{M,T} (AQEW_{k,h}^{m,t} - AQEI_{k,h}^{m,t} - \sum_s BCQ_{s,k,h}^{m,t}) - \text{TLQ}] \times RPP_{I=2} \}$ | | | | | | | | | government and OEB regulations. |
| 143 | NUG Contract Adjustment | N/A | N/A | Manual entry based on the values submitted by <i>OEFC</i> via On-line | Monthly | Due <i>OEFC</i> | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Settlement Amount | | | settlement form “NUG Adjustment Amount Information”, subject to Regulation. | | | | | | | | | government regulation. |
| 144 | Regulated Nuclear Generation Adjustment Amount | N/A | N/A | <p>For dispatchable <i>delivery points</i>: $(GRP - EMP_h^{m,t}) \times AQEI_{k,h}^{m,t}$</p> <p>For non-dispatchable <i>delivery points</i>: $(GRP - HOEP_h) \times \sum^T AQEI_{k,h}^{m,t}$</p> <p>Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> | Interval or Hourly | Due OPG | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |
| 145 | Regulated Hydroelectric Generation Adjustment Amount | N/A | N/A | $NEMSC_{k,h} - \left\{ \sum_H^{M,T} \left[(MWAvg_T \times GRP) + ((AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t}) - MWAvg_T) \times EMP_h^{m,t} \right] \right\}$ <p>Where ‘M’ is the set of all <i>delivery points</i> ‘m’ of OPG’s regulated hydroelectric generating stations.</p> <p>‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month.</p> | Monthly | Due OPG | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to OEB regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | MWAvg is the average hourly net energy production within a given month. | | | | | | | | | |
| 146 | Global Adjustment Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 146 END DECEMBER 31, 2010. CHARGE TYPE 146 REPLACED BY CHARGE TYPES 147 AND 148 EFFECTIVE JANUARY 1, 2011.</p> <p>For Fort Frances Power Corporation Distribution Inc.:</p> $\frac{\sum_{H,M,C} TD \times (\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - EEQ)}{(\sum_{K,H}^{M,T} AQEW_{k,h}^{m,t} + \sum_K EGEI_k - EEQ)}$ <p>For other market participants:</p> $\frac{\sum_{H,M,C} TD \times (\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k)}{(\sum_{K,H}^{M,T} AQEW_{k,h}^{m,t} + \sum_K EGEI_k - EEQ)}$ <p>Where 'H' is the set of all settlement hours 'h' in the month.</p> | Monthly | Due MPs | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where ‘K’ is the set of all <i>market participants</i> ‘k’.</p> <p>Where ‘M’ is the set of all <i>delivery points</i> ‘m’ of <i>market participant</i> ‘k’.</p> <p>Where ‘C’ is the set of the following <i>charge types</i> ‘c’:</p> <p>193, 194, 195, 197, 198, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1450, 1460, 1461, 1462 and 1464.</p> | | | | | | | | | |
| 147 | Class A – Global Adjustment Settlement Amount | N/A | N/A | $\sum_{H,M,C} TD * PDF_{k,m,d}$ <p>Where</p> <p>‘d’ is the ratio of the number of days in the month the Peak Demand Factor was effective compared to the total number of days in the month</p> <p>and</p> <p>‘C’ is the set of the following <i>charge types</i> ‘c’:</p> <p>193, 194, 195, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1466, 1450, 1460, 1461, 1462,</p> | Monthly | Either Way | 13 | N/A | N/A | N/A | | | <p>Eligibility, rates, and other implementation details subject to government regulation.</p> <p>Charge type 147 is also used to settle Interruptible Rate Pilot participants starting with trade date July 1, 2023.</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 1464, 1468, 1469, 1471, 1472, 1473, 1474, 1475. | | | | | | | | | |
| 148 | Class B – Global Adjustment Settlement Amount | N/A | N/A | <p>For Fort Frances Power Corporation Distribution Inc.:</p> $(\sum_{H,M,C} TD - TD_{147}) \times \text{MAX}((\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - EEQ), 0) / \text{Class B Load}$ <p>For other Class B <i>Market Participants</i> and Distributors:</p> $(\sum_{H,M,C} TD - TD_{147}) \times \text{MAX}((\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - GA_AQEW_{g,k,h,M}^{m,t} - PGS_{h,M}), 0)$ <p>Class B Load =</p> $(\sum_K (\text{MAX}(\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - EEQ - \sum_H^{M,T} GA_AQEW_{g,k,h,M}^{m,t} - \sum_H PGS_{h,M}, 0))) - \sum_K U_k$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘K’ is the set of all <i>market participants</i> ‘k’.</p> | Monthly | Either Way | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where ‘M’ is the set of all <i>delivery points</i> ‘m’ of <i>market participant</i> ‘k’.</p> <p>Where ‘C’ is the set of the following <i>charge types</i> ‘c’:</p> <p>193, 194, 195, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1466, 1450, 1460, 1461, 1462, 1464, 1468, 1469, 1471, 1472, 1473, 1474, 1475.</p> | | | | | | | | | |
| 149 | Regulated Price Plan Retailer Settlement Amount | N/A | N/A | <p>Manual entry based on the values submitted by <i>market participants</i> via On-line settlement form “Retailer Payments for Contract Price vs. HOEP for Regulated Consumers with a Retail Contract”.</p> | Monthly | Due LDCs | 13 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 150 | Net Energy Market Settlement Uplift | N/A | 9.3.9.1 | $\frac{\sum_C^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]}{\sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})}$ <p>Where:</p> <p>‘C’ is the set of the following <i>charge types</i> ‘c’ as follows:</p> <p>100, 101, 103, 104, 1131</p> | Hourly | Either Way | 13 | N/A | 0 | 13 | May 1, 2002 | April 30, 2023 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the NEMSC component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 150 | Net Energy Market Settlement Uplift | N/A | 9.3.9.1 | $\frac{\sum_C^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]}{}$ <p>Where: ‘C’ is the set of the following <i>charge types</i> ‘c’ as follows: 1101, 1103, 1111, 1113, 1114, 1115, 103, 104, 1131 ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> | Hourly | Either Way | 13 | N/A | 0 | 13 | May 1, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the NEMSC component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 155 | Congestion Management Settlement Uplift | N/A | 9.3.5.2 and 9.3.5.7 | $\sum_c^{M,T} TD_{k,h,(105, 106, 107, 108,122, 124, 1050)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the CMSC component of <i>hourly uplift</i> is to be reallocated between <i>market</i></p> | Hourly or Monthly (see 9.3.5.7) | Either Way | 13 | N/A | 0 | 13 | | | Pursuant to market rules, Section 9.3.5.7, during an interim period, the disbursements of charge type 105 amounts adjusted as per Section 9.3.5.6 may be made on a monthly basis. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>participant ‘k’ and the other market participant that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 161 | Northern Pulp and Paper Mill Electricity Transition Program Balancing Amount | N/A | N/A | $\sum_K TD_{k,111}$ <p>Where ‘k’ is part of a subset of eligible market participants ‘k’.</p> | Quarterly | Due IESO | 0 | N/A | N/A | N/A | | | This program ends on September 30, 2010. |
| 162 | Ontario Power Generation Rebate Debit | N/A | N/A | <p>** CALCULATIONS FOR CHARGE TYPE 162 END April 30, 2009 **</p> $\text{Payment } (n) = \sum_H [(HOEP_h - ORL) \times (ONPAO_h \times 0.85 - PAA) + (PAP - PAORL) \times PAA]$ <p>OPG rebate (n) = Max [0, Payment (n) – Payment (n-1) + NCF (n-1)]</p> <p>Where:</p> | May 1, 2006 to April 30, 2009 | Due IESO | N/A | N/A | N/A | N/A | | | <p>The OPG rebate quarterly payment will be based on a cumulative calculation commencing May 1, 2006 to the end of each quarter less the same cumulative calculation to the end of the previous quarter.</p> <p>Where the payment formula results in an amount owing to OPG for any quarter, no such payment will be</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘H’ is the set of all <i>settlement hours</i> ‘h’ from May 1, 2006 to the end of the applicable quarter.</p> <p>‘n’ is the current quarter.</p> <p>‘n-1’ is the previous quarter.</p> <p>NCF is the negative amount carried forward and calculated as $NCF(n) = \text{Min} [0, \text{Payment}(n) - \text{Payment}(n-1) + NCF(n-1)]$</p> | | | | | | | | | made to OPG and any such amount will be carried forward into subsequent quarters. |
| 163 | Additional Compensation for Administrative Pricing Debit. | N/A | 7.8.4A.16 or 7.8.4A.10 or 7.13.6.2, and 9.4.8 | $\sum_{c,H}^{M,T} TD_{k,H,(113)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month.</p> <p>Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | This charge will still be used for market suspension events. |
| 164 | Outage Cancellation/ Deferral Debit. | N/A | 5.6.7.4 and 9.4.8.1.3 | $\sum_{c,H}^{M,T} TD_{k,H,(114)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> H. | | | | | | | | | |
| 165 | Unrecoverable Testing Costs Debit | N/A | 9.4.8.1.1 and 4.5.3.4 | $= \sum_{H,c}^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'H' is the set of all <i>settlement hours</i> 'h' in the month.</p> <p>Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |
| 166 | Tieline Reliability Maintenance Debit | N/A | 9.4.8.1.2 and 5.5.3.4 | $= \sum_{H,c}^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'H' is the set of all <i>settlement hours</i> 'h' in the month.</p> <p>Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |
| 167 | Emergency Energy Debit | N/A | 9.4.8.1.5 9.4.2.3A and 5.2.3.3A | $= \sum_{H,c}^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month.</p> <p>Where ‘c’ is any payments made for <i>emergency energy</i> during the applicable period.</p> <p>Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | | | | | | | | | |
| 168 | TR Market Shortfall Debit | N/A | 9.4.8.1.7 and 9.6.14.5.2 | <p>For loads:</p> $TRCAC_k = TRCAD_L \times \sum_H^{M,T} [(AQEW_{k,h}^{m,t}) / \sum_{K,H}^{M,T} (AQEW_{k,h}^{m,t})]$ <p>For exporters:</p> $TRCAC_k = TRCAD_E \times \sum_H^{I,T} [(SQEW_{k,h}^{i,t}) / \sum_{K,H}^{I,T} (SQEW_{k,h}^{i,t})]$ <p>Where</p> $TRCAD_L = (\sum_K TD_C / \sum_K TD_{C,C1}) \times TRCAR$ $TRCAD_E = (\sum_K TD_{C1} / \sum_K TD_{C,C1}) \times TRCAR$ <p>Where ‘C’ is the set of all <i>monthly service charge types c</i> as follows: 650, 651, 652.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where ‘C’ is the set of all <i>monthly export transmission charge types c as follows:653.</i></p> <p>Where ‘H’ is the set of all <i>settlement hours ‘h’ in the month.</i></p> <p>Where ‘T’ is the set of all <i>metering intervals ‘t’ in the set of all settlement hours ‘H’.</i></p> <p>Where ‘M’ is the set of all <i>delivery points ‘m’, excluding any inertie metering points.</i></p> <p>Where ‘I’ is the set of all <i>inertie metering points ‘i’.</i></p> <p>Where ‘K’ is the set of all <i>market participants ‘k’.</i></p> | | | | | | | | | |
| 169 | Station Service Reimbursement Debit | N/A | 9.4.8.1.6 and 9.2.1A.12.2 (a) | $= \sum_{H,c}^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘H’ is the set of all <i>settlement hours ‘h’ in the month.</i></p> <p>Where ‘T’ is the set of all <i>metering intervals ‘t’ in the set of all settlement hours ‘H’.</i></p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | June 1, 2002 | April 30, 2023 | |
| 169 | Station Service Reimbursement Debit | N/A | 9.4.8.1.6 and | $= \sum_{H,c}^{M,T} TD_c$ | Monthly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | 9.2.1A.12.2 (a) | $- \text{GSSR_AQEW}_{k,h}^{i,t} / \sum_{k,H}^{M,T} (\text{AQEW}_{k,h}^{m,t} + \text{SQEW}_{k,h}^{i,t} - \text{GSSR_AQEW}_{k,h}^{i,t})$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | | | | | | | | | |
| 170 | Local Market Power Rebate | N/A | 9.4.8.2.2 9.4.8.2.3 9.3.8A.5 9.3.8A.6 and Ch. 7, Appendix 7.6 | $= \sum_{H,C}^{M,T} \text{TD}_c \times [(\text{AQEW}_{k,h}^{m,t} + \text{SQEW}_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (\text{AQEW}_{k,h}^{m,t} + \text{SQEW}_{k,h}^{i,t})]$ <p>Where ‘c’ denotes <i>charge type</i> 120 and that portion of <i>charge type</i> 130 related to the IOG OFFSET <i>settlement amount</i>. Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | Monthly | Due MP | 13 | N/A | 0 | 13 | | | |
| 171 | Northern Industrial Electricity Rate Program Balancing Amount | N/A | N/A | $\sum_K \text{TD}_{k,121}$ <p>Where ‘k’ is part of a subset of eligible <i>market participants</i> ‘k’.</p> | Quarterly | Due IESO | 0 | N/A | N/A | N/A | July 31, 2011 | April 30, 2022 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 171 | Northern Energy Advantage Program Balancing Amount | N/A | N/A | $\sum_K TD_{k,121}$ <p>Where ‘k’ is part of a subset of eligible <i>market participants</i> ‘k’.</p> | Quarterly | Due <i>IESO</i> | 0 | N/A | N/A | N/A | July 31, 2022 | | |
| 173 | MACD Enforcement Activity Balancing Amount | N/A | N/A | $\sum_K TD_{k,123}$ <p>Where ‘K’ is the set of all <i>market participants</i> ‘k’.</p> <p>Where $TD_{k,123}$ is the <i>settlement amount</i> of charge type 123 for the month for <i>market participant</i> ‘k’.</p> | Monthly | Due <i>IESO</i> | 0 | N/A | N/A | N/A | | | |
| 183 | Generation Cost Guarantee Recovery Debit | N/A | 9.4.8.1.9 | $= \sum_{H,C} TD_{h,c} \times \left[\frac{(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})}{\sum_{k,H} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})} \right]$ <p>Where: ‘C’ is the set of the following <i>charge types</i> ‘c’ as follows: 133, 137 ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month.</p> | Monthly | <i>IESO</i> | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | | | | | | | | | |
| 184 | Demand Response Debit | N/A | 9.4.7C 9.4.7F | $\frac{\sum_{k,H}(TD_{134}) \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]}{}$ <p>Where: ‘H’ is all <i>settlement hours</i> ‘h’ during the <i>billing period</i>.</p> | Monthly | Either way | 13 | N/A | 0 | 5 | | | TDRP and ELRP suspended by the IESO. |
| 186 | Intertie Failure Charge Rebate | HUSA _{k,h} | 9.3.9.1 | $\frac{\sum_C^{M,T} TD_c \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]}{}$ <p>Where: ‘C’ is the set of the following <i>charge types</i> ‘c’ as follows: 135, 136, 1134, 1135, 1136 ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’. Where RQ_{k,h}^{m,t} is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the IFCR component of <i>hourly uplift</i> is to be reallocated between <i>market</i></p> | Hourly | Due MP | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>participant ‘k’ and the other market participant that is a party to the contract in which:</i></p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 190 | Fixed Energy Rate Balancing Amount | N/A | N/A | <p>** CHARGE TYPE 190 REPLACED BY CHARGE TYPE 192 EFFECTIVE JANUARY 1, 2005 **</p> $\sum_{k,H,c}(TD_{140})$ <p>Where: ‘H’ is all <i>settlement hours ‘h’</i> during the <i>trading day</i> for all <i>trading days</i> during the interim period beginning December 1, 2002.</p> | Hourly (type ‘DP’ records only. See: “Format Spec. for Settlement Statement Files and Data Files” for further details) | Either Way | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |
| 191 | Fixed Wholesale Charge Rate Balancing Amount | N/A | N/A | <p>** CALCULATIONS FOR CHARGE TYPE 191 END MARCH 31, 2005 **</p> $\sum_{k,H,c}(TD_{141})$ <p>Where: ‘H’ is all <i>settlement hours ‘h’</i> during the <i>billing period</i>.</p> | Monthly | Either Way | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 192 | Regulated Price Plan Balancing Amount | N/A | N/A | $\sum_K TD_{k,142}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,142}$ is the total <i>settlement amount</i> of <i>charge type</i> 142 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 193 | NUG Contract Adjustment Balancing Amount | N/A | N/A | TD_{143} | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 194 | Regulated Nuclear Generation Balancing Amount | N/A | N/A | TD_{144} | Interval or Hourly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 195 | Regulated Hydroelectric Generation Balancing Amount | N/A | N/A | TD_{145} | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to OEB regulation. |
| 196 | Global Adjustment Balancing Amount | N/A | N/A | $\sum_K, TD_{k,147, 148} - \sum_{197}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,147, 148}$ is the <i>settlement amount</i> of <i>charge type</i> 147 and 148 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 197 | Global Adjustment - Special Programs Balancing Amount | N/A | N/A | $\sum_K TD_{k,1466}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1466}$ is the <i>settlement amount of charge type 1466</i> for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 198 | Renewable Generation Balancing Amount | N/A | N/A | <p>** CALCULATIONS FOR CHARGE TYPE 198 END DECEMBER 31, 2010 **.</p> $\sum_K TD_{k,148}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,148}$ is the <i>settlement amount of charge type 148</i> for the month for <i>market participant</i> 'k'.</p> | Pending | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 199 | Regulated Price Plan Retailer Balancing Amount | N/A | N/A | $\sum_K TD_{k,149}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,149}$ is the <i>settlement amount of charge type 149</i> for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 200 | 10 Minute Spinning Reserve Market | ORSCK,h | 9.3.4.1 | $\sum_{m,t,r} AQORr,k,hm,t \times PRORr,hm,t$ | Interval | Due MP | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Settlement Credit | | | | | | | | | | | | |
| 201 | 10 Minute Spinning Reserve Market Shortfall Rebate | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(251)} \times [(AQEW_{k,h}^{m,t} + SQEW_h^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'T' is the set of 12 metering intervals 't' during settlement hour 'h'.</p> <p>Where RQ_{k,h}^{m,t} is a reallocated quantity whereby market participant 'k' is a party to one or more physical bilateral contracts for settlement hour 'h' in which the operating reserve component of hourly uplift is to be reallocated between market participant 'k' and the other market participant that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | Hourly | Due MP | 13 | N/A | 0 | 13 | | | |
| 202 | 10 Minute Non-spinning Reserve Market Settlement Credit | ORSC _{k,h} | 9.3.4.1 | $\sum_{m,t,r} AQOR_{r,k,h}^{m,t} \times PROR_{r,h}^{m,t}$ | Interval | Due MP | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 203 | 10 Minute Non-spinning Reserve Market Shortfall Rebate | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(253)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'T' is the set of 12 metering intervals 't' during settlement hour 'h'.</p> <p>Where RQ_{k,h}^{m,t} is a reallocated quantity whereby market participant 'k' is a party to one or more physical bilateral contracts for settlement hour 'h' in which the operating reserve component of hourly uplift is to be reallocated between market participant 'k' and the other market participant that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | Hourly | Due MP | 13 | N/A | 0 | 13 | | | |
| 204 | 30 Minute Operating Reserve Market Settlement Credit | ORSC _{k,h} | 9.3.4.1 | $\sum_{m,t,r} AQOR_{r,k,h}^{m,t} \times PROR_{r,h}^{m,t}$ | Interval | Due MP | 13 | 13 | N/A | N/A | | | |
| 205 | 30 Minute Operating Reserve Market Shortfall Rebate | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(255)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ | Hourly | Due MP | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 206 | 10-Minute spinning non-Accessibility Settlement Amount | ORSCB _{r,k,h} | 9.3.4.2-9.3.4.3 | <p>For dispatchable loads and non-aggregated generators:</p> $\text{MIN}(0, (TAOR_{k,h}^{m,t} - AQOR_{r1,k,h}^{m,t}) \times \text{PROR}_{r1,h}^{m,t})$ <p>Where: $TAOR_{k,h}^{m,t} = \text{MAX}(0, AQEW_{k,h}^{m,t} - MC_h^{m,t})$ for <i>dispatchable loads</i></p> | Interval | Due IESO | 13 | N/A | N/A | N/A | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>or, $MAX(0, MAX_CAP_{k,h}^{m,t} - AQEI_{k,h}^{m,t})$ for generators</p> <p>For aggregated generators: $ORIA_CA_{r1,k,h}^{M,t} \times ORCF_{r1,k,h}^{m,t} \times PROR_{r1,h}^{m,t}$</p> <p>Where: $ORIA_CA_{r1,k,h}^{M,t} = MIN(0, TAOR_CA_{k,h}^{M,t} - \sum_M AQOR_{r1,k,h}^{m,t})$</p> $TAOR_CA_{k,h}^{M,t} = MAX(0, \sum_M (MAX_CAP_{k,h}^{m,t} - AQEI_{k,h}^{m,t}))$ $ORCF_{r1,k,h}^{m,t} = ORIA_{r1,k,h}^{m,t} / (\sum_{M1} ORIA_{r1,k,h}^{m,t})$, and M1 represents the set of all delivery points 'm' offering 10-minute synchronized OR $ORIA_{r1,k,h}^{m,t} = MIN(0, (TAOR_{k,h}^{m,t} - AQOR_{r1,k,h}^{m,t}))$ | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 208 | 10-Minute non-Spinning non-Accessibility Settlement Amount | ORSCB _{r,k,h} | 9.3.4.2-9.3.4.3 | <p>For dispatchable loads and non-aggregated generators: $\text{MIN}(0, (\text{MAX}(0, \text{TAOR}_{k,h}^{m,t} - \text{AQOR}_{r1,k,h}^{m,t}) - \text{AQOR}_{r2,k,h}^{m,t}) \times \text{PROR}_{r2,h}^{m,t})$</p> <p>Where: $\text{TAOR}_{k,h}^{m,t} = \text{MAX}(0, \text{AQEW}_{k,h}^{m,t} - \text{MC}_h^{m,t})$ for dispatchable loads or, $\text{MAX}(0, \text{MAX_CAP}_{k,h}^{m,t} - \text{AQEI}_{k,h}^{m,t})$ for generators</p> <p>For aggregated generators: $\text{ORIA_CA}_{r2,k,h}^{M,t} \times \text{ORCF}_{r2,k,h}^{m,t} \times \text{PROR}_{r2,h}^{m,t}$</p> <p>Where: $\text{ORIA_CA}_{r2,k,h}^{M,t} = \text{MIN}(0, \text{TAOR_CA}_{k,h}^{M,t} - \sum_M \text{AQOR}_{r2,k,h}^{m,t})$</p> $\text{TAOR_CA}_{k,h}^{M,t} =$ | Interval | Due IESO | 13 | N/A | N/A | N/A | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $\text{MAX}(0, \sum_M (\text{MAX_CAP}_{k,h}^{m,t} - \text{AQEI}_{k,h}^{m,t}))$ $\text{ORCF}_{r2,k,h}^{m,t} = \text{ORIA}_{r2,k,h}^{m,t} / (\sum_{M2} \text{ORIA}_{r2,k,h}^{m,t}), \text{ and } M2 \text{ represents the set of all delivery points 'm' offering 10-minute non-synchronized OR}$ $\text{ORIA}_{r2,k,h}^{m,t} = \text{MIN}(0, (\text{TAOR}_{k,h}^{m,t} - \text{AQOR}_{r2,k,h}^{m,t}))$ | | | | | | | | | |
| 210 | 30-Minute non-Accessibility Settlement Amount | ORSCB _{r,k,h} | 9.3.4.2-9.3.4.3 | <p>For dispatchable loads and non-aggregated generators:</p> $\text{MIN}(0, (\text{MAX}(0, \text{TAOR}_{k,h}^{m,t} - \text{AQOR}_{r1,k,h}^{m,t} - \text{AQOR}_{r2,k,h}^{m,t}) - \text{AQOR}_{r3,k,h}^{m,t}) \times \text{PROR}_{r3,h}^{m,t})$ <p>Where:</p> $\text{TAOR}_{k,h}^{m,t} = \text{MAX}(0, \text{AQEW}_{k,h}^{m,t} - \text{MC}_h^{m,t}) \text{ for dispatchable loads}$ <p>or,</p> $\text{MAX}(0, \text{MAX_CAP}_{k,h}^{m,t} - \text{AQEI}_{k,h}^{m,t}) \text{ for generators}$ <p>For aggregated generators:</p> | Interval | Due IESO | 13 | N/A | N/A | N/A | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $ORIA_CA_{r3,k,h}^{m,t} \times ORCF_{r3,k,h}^{m,t} \times PROR_{r3,h}^{m,t}$ <p>Where:</p> $ORIA_CA_{r3,k,h}^{M,t} = \text{MIN}(0, TAOR_CA_{k,h}^{M,t} - \sum_M AQOR_{r3,k,h}^{m,t})$ $TAOR_CA_{k,h}^{M,t} = \text{MAX}(0, \sum_M (\text{MAX_CAP}_{k,h}^{m,t} - AQEI_{k,h}^{m,t}))$ <p>$ORCF_{r3,k,h}^{m,t} = ORIA_{r3,k,h}^{m,t} / (\sum_{M3} ORIA_{r3,k,h}^{m,t})$, and M3 represents the set of all delivery points ‘m’ offering 30-minute OR</p> $ORIA_{r3,k,h}^{m,t} = \text{MIN}(0, (TAOR_{k,h}^{m,t} - AQOR_{r3,k,h}^{m,t}))$ | | | | | | | | | | |
| 250 | 10 Minute Spinning Market Reserve Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(200)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘T’ is the set of 12 metering intervals ‘t’ during settlement hour ‘h’.</p> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2002 | April 30, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 250 | 10 Minute Spinning Market Reserve Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_C^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where: ‘C’ is the set of the following <i>charge types</i> ‘c’ as follows: 200, 206 Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’. Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i></p> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘k’ is a party to one or more <i>physical bilateral contracts</i> for settlement hour ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 251 | 10 Minute Spinning Market Reserve Shortfall Debit | ORSSD _{k,r,h} | 9.3.8.2 | Manual Entry as per 9.3.8.2 where the value below which ORESF _{k,r,h,m,t} shall be set at zero equals ∞. | Interval | Due IESO | 13 | 13 | N/A | N/A | | | |
| 252 | 10 Minute Non-spinning Market Reserve Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(202)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>Where RQ_{k,h}^{m,t} is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for settlement</p> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2002 | April 30, 2023 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>hour ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant ‘k’</i> and the other <i>market participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 252 | 10 Minute Non-spinning Market Reserve Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_C^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where: ‘C’ is the set of the following <i>charge types ‘c’</i> as follows: 202, 208 Where ‘T’ is the set of 12 <i>metering intervals ‘t’</i> during <i>settlement hour ‘h’</i>. Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant ‘k’</i> is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour ‘h’</i> in which the <i>operating reserve</i> component of <i>hourly uplift</i> is</p> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which: $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 253 | 10 Minute Non-spinning Market Reserve Shortfall Debit | ORSSD _{k,r,h} | 9.3.8.2 | Manual Entry as per 9.3.8.2 where the value below which ORESF _{k,r,h,m,t} shall be set at zero equals ∞ | Interval | Due IESO | 13 | 13 | N/A | N/A | | | |
| 254 | 30 Minute Operating Reserve Market Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_c^{M,T} TD_{k,h,(204)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’. Where RQ _{k,h} ^{m,t} is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market</i> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2002 | April 30, 2023 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>participant</i> that is a party to the contract in which:</p> $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 254 | 30 Minute Operating Reserve Market Hourly Uplift | HUSA _h | 9.3.9.1 | $\sum_C^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where: ‘C’ is the set of the following <i>charge types</i> ‘c’ as follows: 204, 210 Where ‘T’ is the set of 12 <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’. Where $RQ_{k,h}^{m,t}$ is a reallocated quantity whereby <i>market participant</i> ‘k’ is a party to one or more <i>physical bilateral contracts</i> for <i>settlement hour</i> ‘h’ in which the <i>operating reserve</i> component of <i>hourly uplift</i> is to be reallocated between <i>market participant</i> ‘k’ and the other <i>market participant</i> that is a party to the contract in which:</p> | Hourly | Due IESO | 13 | N/A | 0 | 13 | May 1, 2023 | | Please refer to MR-00467 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$ | | | | | | | | | |
| 255 | 30 Minute Operating Reserve Market Shortfall Debit | ORSSD _{k,r,h} | 9.3.8.2 | Manual Entry as per 9.3.8.2 where the value below which ORESF _{k,r,h,m,t} shall be set at zero equals ∞ | Interval | Due IESO | 13 | 13 | N/A | N/A | | | |
| 400 | Black Start Capability Settlement Credit | N/A | 9.4.2.2 | Manual Entry as per 9.4.2.2 | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |
| 404 | Regulation Service Settlement Credit | N/A | 9.4.2.3 | Manual Entry as per 9.4.2.3 | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |
| 406 | Emergency Demand Response Program Credit | N/A | 9.4.2.3A | Manual Entry as per 9.4.2.3A | Monthly | Due MP | N/A | N/A | N/A | N/A | | | EDRP no longer contracted by the IESO. |
| 410 | IESO-Controlled Grid Special Operations Credit | N/A | 5.8.2.6 | Manual Entry as per 5.8.2.6 | Monthly | Either way | 13 | N/A | N/A | N/A | | | |
| 450 | Black Start Capability Settlement Debit | N/A | 9.4.2.2 | $= \sum_{H,c}^{M,T} TD_{h,(400)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'. | | | | | | | | | |
| 451 | Hourly Reactive Support and Voltage Control Settlement Debit | N/A | 9.4.2.4 | $= \sum_C^{M,T} TD_{h,c} \times \left[\frac{(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})}{\sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})} \right]$ Where 'C' is the set of the following charge types 'c' as follows: 1401, 1402, 1404, 1405, 1451 Where 'T' is the set of all <i>metering intervals</i> 't' during <i>settlement hour</i> 'h'. | Hourly | Due IESO | 13 | N/A | 0 | 13 | | | |
| 452 | Monthly Reactive Support and Voltage Control Settlement Debit | N/A | 9.4.2.4 | $= \sum_{H,C}^{M,T} TD_{h,c} \times \left[\frac{(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})}{\sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})} \right]$ Where 'C' is the set of the following charge types 'c' as follows: 1403, 1406, 1407, 1408, 1409, 1417 Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'. | | | | | | | | | |
| 454 | Regulation Service Settlement Debit | N/A | 9.4.2.3 | $= \sum_{H,c}^{M,T} TD_{h,(404)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'H' is the set of all <i>settlement hours</i> 'h' in the month.</p> <p>Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |
| 460 | IESO-Controlled Grid Special Operations Debit | N/A | 5.8.2.6 | $= \sum_{H,c}^{M,T} TD_{h,(410)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where 'H' is the set of all <i>settlement hours</i> 'h' in the month.</p> <p>Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'.</p> | Monthly | Either way | 13 | N/A | 0 | 13 | | | |
| 500 | Must Run Contract Settlement Credit | N/A | 9.4.2.1 | Manual Entry as per 9.4.2.1 | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |
| 550 | Must Run Contract Settlement Debit | N/A | 9.4.2.1 | $= \sum_{H,c}^{M,T} TD_{h,(500)} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | | | | | | | | | |
| 600 | Network Service Credit | N/A | 9.4.1 / 9.4.3 | $\sum_{k,H,c}(TD_{650})$ Where ‘H’ is the set of the <i>settlement hours</i> ‘h’ in the month during which the Network Service Demand occurs at every <i>delivery point</i> defined for Transmission Network Service charges. | Monthly | Due applicable <i>transmitters</i> | 13 | N/A | N/A | N/A | | | Subject to the OEB “Ontario Transmission Rate Order”. |
| 601 | Line Connection Service Credit | N/A | 9.4.1 / 9.4.3 | $\sum_{k,H,c}(TD_{651})$ Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month during which the Line Connection Service Demand occurs at every <i>delivery point</i> defined for Transmission Line Connection Service charges. | Monthly | Due applicable <i>transmitters</i> | 13 | N/A | N/A | N/A | | | Subject to the OEB “Ontario Transmission Rate Order”. |
| 602 | Transformation Connection Service Credit | N/A | 9.4.1 / 9.4.3 | $\sum_{k,H,c}(TD_{652})$ Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month during which the Transformation Connection | Monthly | Due applicable <i>transmitters</i> | 13 | N/A | N/A | N/A | | | Subject to the OEB “Ontario Transmission Rate Order”. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Demand occurs at every <i>delivery point</i> defined for Transmission Transformation Connection Service charges. | | | | | | | | | |
| 603 | Export Transmission Service Credit | N/A | 9.4.1 / 9.4.3 | $\sum_{k,H,c}(TD_{653}^i)$ Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. Where 'i' is an <i>intertie metering point</i> 'i' where an export transaction occurred during the month Each <i>charge type</i> 603 line detail record line item is therefore totaled on the basis of TD ₆₅₃ per <i>intertie metering point</i> 'i' per month. | Monthly | Due applicable <i>transmitter</i> | 13 | N/A | N/A | N/A | | | Subject to the OEB "Ontario Transmission Rate Order". |
| 650 | Network Service Charge | N/A | 9.4.1 / 9.4.3 | $NSD_{k,h}^m \times PTS-N$ The Billing Demand for Network Transmission Service (kW) is defined as the higher of: Transmission customer coincident peak demand (kW) in the hour of the month when the total hourly demand of all PTS customers is highest for the month; and | Monthly | Due <i>IESO</i> | 13 | N/A | N/A | N/A | | | Subject to the OEB "Ontario Transmission Rate Order". |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 85% of the customer peak demand in any hour during the peak period. | | | | | | | | | |
| 651 | Line Connection Service Charge | N/A | 9.4.1 / 9.4.3 | $LCD_{k,h}^m \times PTS-L$ Where 'h' is the <i>settlement hour</i> of the current <i>billing period</i> in which $LCD_{k,h}^m$ denotes the non-coincident peak demand for the month. | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Subject to the OEB "Ontario Transmission Rate Order". |
| 652 | Transformation Connection Service Charge | N/A | 9.4.1 / 9.4.3 | $TCD_{k,h}^m \times PTS-T$ Where 'h' is the <i>settlement hour</i> of the current <i>billing period</i> in which $TCD_{k,h}^m$ denotes the non-coincident peak demand for the month. | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Subject to the OEB "Ontario Transmission Rate Order". |
| 653 | Export Transmission Service Charge | N/A | 9.4.1 / 9.4.3 | $\sum_H^T SQEW_{k,h}^{i,t} \times ETS$ Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. Where 'T' is the set of all <i>metering intervals</i> 't' during the set of <i>settlement hours</i> 'H'. | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | Subject to the OEB "Ontario Transmission Rate Order". |
| 700 | Dispute Resolution Settlement Amount | N/A | 3.2.7 | Manual Entry as per 3.2.7 | Monthly | Due MP | 13 | 13 | 0 | 13 | | | Note: tax would follow original disputed transaction |
| 702 | Debt Retirement Credit | N/A | 9.4.6 | $\sum_{k,H,c} TD_{752}$ | Monthly | Due Ministry of Finance | 0 | N/A | N/A | N/A | | | Ontario Regulations |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | | | | | | | | | | 493/01 and 494/01 See Ministry of Energy website for details. |
| 703 | Rural and Remote Settlement Credit | N/A | 9.4.4 | Manual Entry as per Reg | Monthly | Due MP as per Reg | 13 | N/A | N/A | N/A | | | Ontario Regulation 442/01 See Ministry of Energy website for details. |
| 704 | OPA Administration Credit | N/A | N/A | $\sum_K TD_{k,754}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,754}$ is the <i>settlement amount of charge type 754</i> for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |
| 705 | Ontario Fair Hydro Plan First Nations On-reserve Delivery Amount | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement form "First Nations On-Reserve Delivery Credit (FNDC)"; | Monthly | Due LDCs either way | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |
| 706 | Ontario Fair Hydro Plan Distribution Rate Protection Amount | N/A | N/A | Manual entry based on: | Monthly | Due LDCs either way | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | (1) the values submitted via on-line settlement form “Distribution Rate Protection (DRP)”; | | | | | | | | | |
| 750 | Dispute Resolution Balancing Amount (IESO) | N/A | 3.2.7 | $\sum_k TD_{k,700}$, where applicable | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | |
| 751 | Dispute Resolution Board Service Debit | N/A | | | | | 13 | 13 | 13 | 13 | | | |
| 752 | Debt Retirement Charge | N/A | 9.4.6 | $AQEW_{k,h}^{m,t} \times TP$ Where ‘k’ is part of a subset of <i>market participants</i> meeting the criteria of any government regulation defining the ultimate <i>consumers</i> of <i>energy</i> . | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Ontario Regulations 493/01 and 494/01 See Ministry of Energy website for details. |
| 753 | Rural and Remote Settlement Debit | N/A | 9.4.4 | $AQEW_{k,h}^{m,t} \times TP$ | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Ontario Regulation 442/01 See Ministry of Energy website for details. |
| 754 | OPA Administration Charge | N/A | N/A | $\sum_H^T AQEW_{k,h}^{m,t} \times TP$ Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'T' is the set of all <i>metering intervals</i> 't' in <i>settlement hour</i> 'h'. Where TP is the rate (\$/MWh) for the <i>OPA Administration Charge</i> set by <i>OEB</i> . | | | | | | | | | |
| 755 | MOE - Ontario Fair Hydro Plan First Nations On-reserve Delivery Balancing Amount | N/A | N/A | $\Sigma KTDk,705$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TDk,705 is the total <i>settlement amount of charge type 705</i> for the month for <i>market participant</i> 'k'. | Monthly | Due Ministry of Energy | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |
| 756 | MOE - Ontario Fair Hydro Plan Distribution Rate Protection Balancing Amount | N/A | N/A | $\Sigma KTDk,706$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TDk,706 is the total <i>settlement amount of charge type 706</i> for the month for <i>market participant</i> 'k'. | Monthly | Due Ministry of Energy | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |
| 850 | Market Participant | N/A | 2.8.6 | Manual Entry as per 2.8.6 | Monthly | Due <i>IESO</i> | 13 | 13 | 13 | 13 | | | |

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| | Default Settlement Debit (recovery) | | | | | | | | | | | | |
| 851 | Market Participant Default Interest Debit | N/A | 2.8.3, 2.8.5 | Manual Entry as per 2.8.3 and 2.8.5 | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | |
| 900 | GST/HST Credit | N/A | N/A | $\sum_C TD_{k,c}$ A summation of all Goods and Services Tax Credits or Harmonized Sales Tax Credits payable to <i>market participant</i> ‘k’ across all <i>charge types</i> ‘c’. Where ‘C’ is the set of all <i>charge types</i> ‘c’. | | Due MP | N/A | N/A | N/A | N/A | | | Only appear as “SC” record types. |
| 950 | GST/HST Debit | N/A | N/A | $\sum_C TD_{k,c}$ A summation of all Goods and Services Tax Debits or Harmonized Sales Tax Debits payable <i>by market participant</i> ‘k’ across all <i>charge types</i> ‘c’. Where ‘C’ is the set of all <i>charge types</i> ‘c’. | | Due IESO | N/A | N/A | N/A | N/A | | | Only appear as “SC” record types. |
| 1050 | Self-Induced Dispatchable Load CMSC Clawback | N/A | 9.3.5.1A | BUSINESS RULES are used in conjunction with the definitions below to specify the criteria by which | Interval | Due IESO | 13 | N/A | N/A | N/A | | | The decision rule for ramping up or down is described in |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>the IESO will recover <i>constrained off</i> CMSC paid to <i>dispatchable load</i> facilities.</p> <p>Business Rule 1 – Materiality: <i>Constrained off</i> CMSC is allowed for an interval during a <i>constrained off</i> event if the total amount of CMSC paid for the trade day to that <i>dispatchable load</i> is less than \$4000. The daily total includes negative CMSC.</p> <p>**BUSINESS RULE 1 – MATERIALITY THRESHOLD END JUNE 1, 2019</p> <p>Business Rule 2 – Non-Dispatchable Portion of Load: <i>Constrained off</i> CMSC is not allowed for an interval during a <i>constrained off</i> event if the CMSC is paid for portions of the dispatch where the load has bid greater than or equal to MMCP, indicating that it is a non-dispatchable in that range.</p> <p>$[-1OP(EMP_h^{m,t}, MQSW_{k,h}^{m,t}, BL) - MAX(-1OP(EMP_h^{m,t}, DQSW_{k,h}^{m,t},$</p> | | | | | | | | | | Market Manual 5.5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.9.3. |

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| | | | | $BL), -1OP(EMP_h^{m,t}, AQEW_{k,h}^{m,t}, BL)] -$ $[-1OP(EMP_h^{m,t}, MQSW_{k,h}^{m,t}, BL) -$ $MAX(-1OP(EMP_h^{m,t}, DQSW_{k,h}^{m,t}, BL), -1OP(EMP_h^{m,t}, AQEW_{k,h}^{m,t}, BL), -1OP(EMP_h^{m,t}, MC_h^m, BL)]$ <p>Where 'MC' is minimum consumption level and is equal to the quantity in the price quantity pair where the bidding price is MMCP (i.e., \$2000).</p> <p>This business rule applies unless CMSC is allowed because of materiality (defined by Business Rule 1).</p> <p>Business Rule 3 – Dispatch Deviation: <i>Constrained off</i> CMSC is not allowed for an interval during a <i>constrained off</i> event if the current 5-minute constrained schedule exceeds the revenue meter value in the previous interval plus 2.5 minutes of ramping. This business rule applies unless CMSC is allowed because of:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Materiality (defined by Business Rule 1); or</p> <p>The load has been <i>constrained off</i> economically (defined below – ‘Economically <i>constrained off</i> interval’); or</p> <p>Operating reserve has been activated (defined below – ‘Operating Reserve Activation interval’); or</p> <p>The load is ramping (defined below – ‘Ramping interval’); or</p> <p>The load has been manually dispatched down for reliability (defined below – ‘Manual Dispatch for Reliability’).</p> <p>Business Rule 4 – Facility off-line or unable to follow dispatch instructions: <i>Constrained off</i> CMSC is not allowed for an interval during a <i>constrained off</i> event if the constrained schedule is 0 MW and the consumption is less than 1 MW, or if the consumption is 0 MW.</p> <p>This business rule applies unless CMSC is allowed because of:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Materiality (defined by Business Rule 1); or</p> <p>The load has been <i>constrained off</i> economically (defined below – ‘Economically <i>constrained off</i> interval’); or</p> <p>Operating reserve has been activated (defined below – ‘Operating Reserve Activation interval’); or</p> <p>The load has been manually dispatched down for reliability (defined below – ‘Manual Dispatch for Reliability’).</p> <p>In addition to the Business Rules 1 to 4 described above, <i>constrained off</i> CMSC is not allowed for hour ‘h’ if a <i>dispatchable load</i> changes its <i>energy bid</i> that results in a change in the <i>facility’s market schedule</i> and the ramping up or down of the <i>dispatchable load</i>.</p> <p>DEFINITIONS – There are a number of definitions that are used in the specification of criteria for recovery of <i>constrained off</i> CMSC</p> | | | | | | | | | |

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| | | | | <p>paid to dispatchable load facilities. These are:</p> <p>Constrained-off event: A <i>constrained off</i> event comprises one or more consecutive intervals where the <i>market schedule</i> is greater than the constrained schedule and the <i>market schedule</i> is greater than the actual quantity of energy withdrawn. Both conditions must exist to be considered a <i>constrained off</i> event.</p> <p>Economic Constrained-off interval: A <i>dispatchable load</i> is considered to be ‘economically <i>constrained off</i>’ in an interval if the relevant nodal price is greater than or equal to the <i>bid</i> price for either the current interval, the next interval or the previous interval. The inequality should be applied to the last MW <i>constrained off</i>.</p> <p>Operating Reserve Activation Interval (ORA): A <i>dispatchable load</i> is considered to be dispatched in an interval as part of an activation of</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>operating reserve</i> if one or more of the following conditions exist: The constrained schedule is labeled with the reason code ‘ORA’. The interval is 1-3 intervals before an interval with the ‘ORA’ code. The interval is 1-3 intervals after an interval with the ‘ORA’ code.</p> <p>Ramping Interval: A <i>generation unit</i> is considered to be ramping up or ramping down when the unconstrained schedule differs between consecutive hours. A <i>dispatchable load</i> is considered to be ‘ramping’ in an interval if one of the following exist: It is one of the first 3 intervals of the second hour when ramping up. It is one of the last 3 intervals of the first hour when ramping down.</p> <p>Manual Dispatch for Reliability: A <i>dispatchable load</i> is considered to be a ‘manually constrained off for reliability’ if the <i>IESO</i> Control Room logs indicate that the <i>IESO</i> needed to</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | constrain off the load for system or for local requirements. | | | | | | | | | |
| 1051 | Ramp-Down CMSC Claw Back | RDCB _{k,h} | 9.3.5.1G | $RDCB_{k,h}^{m,t} = -1 \times TD_{k,h,105}^{m,t}$ (See applicable <i>market manual</i>) | Interval | Either Way | 13 | N/A | N/A | N/A | | | Conditions for the Ramp-Down CMSC Claw Back are described in Market Manual 5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.31. |
| 1101 | Real-Time Energy Settlement Amount for Dispatchable Generators | NEMSC _{k,h} | 9.3.3.2 | $EMP_h^{m,t} \times ((AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t}) + \sum_{S,B} (BCQ_{s,k,h}^{m,t} - BCQ_{k,b,h}^{m,t}))$ | Interval | Either Way | 13 | N/A | N/A | N/A | May 1, 2023 | | |
| 1103 | Real-Time Energy Settlement Amount for Dispatchable Loads | NEMSC _{k,h} | 9.3.3.2 | $EMP_h^{m,t} \times ((AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t}) + \sum_{S,B} (BCQ_{s,k,h}^{m,t} - BCQ_{k,b,h}^{m,t}))$ | Interval | Either Way | 13 | N/A | N/A | N/A | May 1, 2023 | | |
| 1111 | Real-Time Energy Settlement Amount for Imports | NEMSC _{k,h} | 9.3.3.2 | $EMP_h^{m,t} \times (SQEI_{k,h}^{i,t} + \sum_{S,B} (BCQ_{s,k,h}^{m,t} - BCQ_{k,b,h}^{m,t}))$ | Interval | Either Way | N/A | 13 | N/A | N/A | May 1, 2023 | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1113 | Real-Time Energy Settlement Amount for Exports | NEMSC _{k,h} | 9.3.3.2 | $EMP_h^{m,t} \times (((-1) \times SQEW_{k,h}^{i,t}) + \sum_{S,B} (BCQ_{s,k,h}^{m,t} - BCQ_{b,k,h}^{m,t}))$ | Interval | Either Way | N/A | N/A | 0 | 13 | May 1, 2023 | | |
| 1114 | Real-Time Energy Settlement Amount for Non-Dispatchable Generators | NEMSC _{k,h} | 9.3 | $(HOEP_h \times \sum_T (AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t} + \sum_S (BCQ_{s,k,h}^{m,t}))) - (\sum_{B,T} (EMP_h^{m,t} \times BCQ_{b,k,h}^{m,t}))$ | Hourly | Either Way | 13 | N/A | N/A | N/A | May 1, 2023 | | |
| 1115 | Real-Time Energy Settlement Amount for Non-Dispatchable Loads | NEMSC _{k,h} | 9.3 | $(HOEP_h \times \sum_T (AQEI_{k,h}^{m,t} - AQEW_{k,h}^{m,t} + \sum_S (BCQ_{s,k,h}^{m,t}))) - (\sum_{B,T} (EMP_h^{m,t} \times BCQ_{b,k,h}^{m,t}))$ | Hourly | Either Way | 13 | N/A | N/A | N/A | May 1, 2023 | | |
| 1130 | Day-Ahead Intertie Offer Guarantee Settlement Credit | DA_IOG _{k,h} | 9.3.8A.2A | <p><u>**CALCULATIONS FOR CHARGE TYPE 1130 END OCTOBER 12, 2011. CHARGE TYPE 1130 REPLACED BY CHARGE TYPE 1131 EFFECTIVE OCTOBER 13, 2011.</u></p> <p>The Day-Ahead Intertie Offer Guarantee settlement amount is derived as follows: For all day-ahead import transactions other than those that are subject to a constrained on event in the real-time market:</p> | Hourly | Due MP | N/A | 13 | 13 | 13 | | | Subject to IOG OFFSET process under the provisions of 9.3.8A.3 (see also, entry for charge type 130 for further details) |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $\text{MIN}(\text{PDR_DQSI}_{k,h}^{i,t}, \text{DQSI}_{k,h}^{i,t}), \text{PDR_BE}_{k,h}^{i,t}) + \text{TD}_{k,h,105}^i]$ <p>Or, in the case of an import transaction subject to a <i>constrained on event</i> in the <i>real-time market</i>:</p> $\sum^I (-1) * \text{MIN}[0, \sum^T \text{OP}(\text{EMP}_h^{i,t}, \text{MIN}(\text{PDR_DQSI}_{k,h}^{i,t}, \text{DQSI}_{k,h}^{i,t}), \text{PDR_BE}_{k,h}^{i,t}) + \text{OPE}\{\text{adj}\}_{k,h}^{i,t}]$ <p>See 9.3.8A.2A for the definition of the Operating Profit (OP) function referenced above.</p> <p>Where:</p> <p>‘I’ is the set of relevant <i>intertie metering points</i> ‘i’.</p> <p>‘T’ is the set of all <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’.</p> <p>$\text{TD}_{k,h,105}^i$ is that component of <i>charge type 105</i> (“Congestion Management Settlement Credit for Energy”) applicable to <i>market participant</i> ‘k’ at <i>intertie metering point</i> ‘i’ during <i>settlement hour</i> ‘h’.</p> | | | | | | | | | |
| 1131 | Intertie Offer Guarantee Settlement Credit | IOG _{k,h} | 9.3.8A | The Day-Ahead Intertie Offer Guarantee <i>settlement amount</i> is derived as follows: | Hourly | Due MP | N/A | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $[(DA_IOG_COMP1 + DA_IOG_COMP2 - DA_IOG_COMP3)]$ <p>Where</p> <p>DA_IOG_COMP1: $-1 \times OP(EMP_h^{it}, \min(DA_DQSI_{k,h}^{it}, DQSI_{k,h}^{it}), DA_BE_{k,h}^{it})$</p> <p>DA_IOG_COMP2: $XDA_BE_{k,h}^{it} - \max(0, XBE_{k,h}^{it})$</p> <p>DA_IOG_COMP3: Component 3 is calculated when: the CMSC for energy ($TD_{k,h,105}^{m,t}$) for the same metering interval is a value other than zero.</p> <p>For Component 3 (DA_IOG_COMP3), the six scenarios of the possible orderings of the generator's DA_DQSI, DQSI and MQSI are as follows:</p> <ol style="list-style-type: none"> 1. $DQSI \geq MQSI \geq DA_DQSI$ 2. $MQSI \geq DQSI \geq DA_DQSI$ 3. $DQSI > DA_DQSI > MQSI$ 4. $MQSI > DA_DQSI > DQSI$ 5. $DA_DQSI \geq DQSI > MQSI$ 6. $DA_DQSI \geq MQSI > DQSI$ <p>Scenario 1 and 2:</p> | | | | | | | | | |

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| | | | | <p>0</p> <p>Scenario 3: $OP(EMP_{h^{it}}, MQSI_{k,h^{it}}, BE) - OP(EMP_{h^{it}}, DA_DQSI_{k,h^{it}}, BE)$</p> <p>Scenario 4: $OP(EMP_{h^{it}}, DA_DQSI_{k,h^{it}}, BE) - OP(EMP_{h^{it}}, DQSI_{k,h^{it}}, BE)$</p> <p>Scenario 5 and 6: $TD_{k,h,105^{m,t}}$</p> <p>Where 'I' is the set of relevant <i>intertie metering points</i> 'i'. 'T' is the set of all <i>metering intervals</i> 't' during <i>settlement hour</i> 'h'. 'OP' is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8A.2.</p> <p>$XDA_BE_{k,h^{it}} = (-1) * [OP(EMP_{h^{it}}, DA_DQSI_{k,h^{m,t}}, DA_BE) - OP(EMP_{h^{it}}, \min(DA_DQSI_{k,h^{m,t}}, DQSI_{k,h^{m,t}}, DA_BE))]$</p> <p>$XBE_{k,h^{it}} = (-1) * [OP(EMP_{h^{it}}, DA_DQSI_{k,h^{it}}, BE) - OP(EMP_{h^{it}}, \min(DA_DQSI_{k,h^{it}}, DQSI_{k,h^{it}}, BE))]$</p> <p>Where $EMP_{h^{it}} = 0$</p> <p>The Intertie Offer Guarantee <i>settlement amount</i> is derived from an hourly <i>Energy Import</i> sub component ($EIM_{k,h}$) as follows:</p> | | | | | | | | | | |

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| | | | | $RT-IOG_{k,h} = EIM_{k,h}$ The Real-Time Intertie Offer Guarantee (RT-IOG _{k,h}) <i>settlement amount</i> is derived as follows: $\sum_i (-1) * \text{MIN}[0, \sum^T OP(\text{EMP}_h^{i,t}, \text{MQSI}_{k,t})]$ Where ‘I’ is the set of relevant <i>intertie metering points</i> ‘i’. ‘T’ is the set of all <i>metering intervals</i> ‘t’ during <i>settlement hour</i> ‘h’. ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8A.2. The IOG_OFFSET component of this <i>charge type</i> is calculated as follows: The Day-Ahead IOG rate: $DA_IOG_RATE = \text{IF} [DA_IOG \text{ is not NULL, } DA_IOG / \text{min}(DA_DQSI, DQSI), 0]$ The Real-Time IOG rate: $RT_IOG_RATE = \text{IF}[RT_IOG \text{ is NULL, } 0, RT_IOG/DQSI]$ The matrix is arranged in ascending order on DA_IOG_RATE and the day-ahead import quantities are offset against the day-ahead export schedule quantities: | | | | | | | | | | |

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| | | | | <p> $DA_DQSW_REM = [MAX[0, DA_OFFSET_DQSW]]$ $DA_OFFSET_DQSW = MIN[DA_DQSI, DQSI, DA_DQSW_REM]$ </p> <p>The day-ahead IOG offset flag:</p> <p> $DA_OFFSET_FLAG = IF(DA_OFFSET_DQSW > [50\% \times MIN(DA_DQSI, DQSI)], Y, N)$ </p> <p>The IOG offset rate:</p> <p> $IOG_SETTLEMENT_RATE = IF[DA_OFFSET_FLAG = 'Y', RT_IOG_RATE, MAX(RT_IOG_RATE, DA_IOG_RATE)]$ </p> <p>Subject to:</p> <p> $MI[n,9] \geq MIN[n-1,9]$ $MI[1,9] = MIN[MI[1 to N,9]]$ $MI[1 to N,9] < 0$ </p> <p>The Gross IOG amount:</p> <p>IOG = IOG dollar amount associated with the used to calculate IOG_SETTLEMENT_RATE</p> <p>The matrix is arranged in ascending order on IOG_SETTLEMENT_RATE and the real-time import quantities are offset against the real-time export schedule quantities:</p> <p> $RT_DQSW_REM = [MAX[0, DQSW - RT_OFFSET_DQSW]]$ </p> | | | | | | | | | | |

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| | | | | $RT_OFFSET_DQSW = \min[DQSI, RT_DQSW_REM]$ The IOG offset settlement amount: $IOG_OFFSET = (IOG_SETTLEMENT_RATE * RT_OFFSET_DQSW)$ The IOG settlement amount: $NET_IOG = (IOG - IOG_OFFSET)$ | | | | | | | | | |
| 1133 | Day-Ahead Generation Cost Guarantee Payment | DA_GCG _{k,h} | 9.4.7D | <p>**CALCULATIONS FOR CHARGE TYPE 1133 END OCTOBER 12, 2011.</p> <p><u>Dispatchable delivery points:</u></p> $\max[0, (DA_CGC + DA_COST - \sum^T EMP_h^{m,t} \times AQEI\{limited\}_{k,h}^{m,t} - \sum^T CMSC\ REV_{k,h}^{m,t})]$ <p>Subject to: $AQEI\{limited\}_{k,h}^{m,t} = \min[AQEI_{k,h}^{m,t}, \textit{minimum loading point}]$ Where 'DA_CGC' is a Day-Ahead Combined Guaranteed Costs variable, assessed in accordance with the applicable <i>market manual</i> (see</p> | Hourly | Due MP | 13 | N/A | N/A | N/A | | | |

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| | | | | <p>also Section 2.1 “Variable Description”).</p> <p>Where ‘m’ is <i>delivery point</i> ‘m’ at which the <i>generation unit</i> incurring the relevant costs is located.</p> <p>Where ‘T’ is a set of <i>metering intervals</i> ‘t’ from a valid start time to the end of <i>minimum generation block run-time</i>.</p> <p>Where $AQEI\{limited\}_{k,h}^{m,t}$ shall denote all allocated quantities in MWh of <i>energy</i> injected at <i>delivery point</i> ‘m’ irrespective of any submission of <i>physical allocation data</i> by <i>market participant</i> ‘k’ in metering interval ‘t’ of <i>settlement hour</i> ‘h’ up to the <i>generation unit’s minimum loading point</i>.</p> <p>Where DA_COST is fuel and O&M cost component related to operation of the <i>generation unit</i> at its <i>minimum loading point</i> during its <i>minimum generation block run-time</i> (these costs are calculated based on the <i>offer price</i> associated with Pre-dispatch of record).</p> | | | | | | | | | |

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| | | | | $DA_COST_k = \sum_{t \in H2} COST(AQEI\{limited\}_{k,h}^{m,t}, PDR_BE_{k,h}^{m,t})$ <p>A. Where the COST function is defined as follows:</p> $COST(Q,B) = \sum_{i=1}^{s^*} P_i \cdot (Q_i - Q_{i-1})$ <p>where:</p> <ul style="list-style-type: none"> • B is the $n \times 2$ matrix (B) of offered <i>price-quantity pairs</i> (P_i, Q_i) • s^* is the highest indexed row of B such that $Q_{s^*-1} \leq Q \leq Q_{s^*}$ and where $Q_0=0$ <p>B. Where H2 is the set of all <i>settlement hours</i> ‘h’ during the period from the <i>Pre-dispatch of Record</i> ‘start hour’ until the end of <i>minimum generation block run</i></p> <p>C. Where ‘T*’ is the set of metering intervals ‘t’ in the set of all settlement hours ‘H2’</p> <p>Where $CMSC_REV_{k,h}^{m,t}$ is any real-time $CMSC(TD_{k,h,105}^{m,t})$ payment</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>associated with allocated quantities in MWh of <i>energy</i> injected at <i>delivery point</i> ‘m’ irrespective of any submission of <i>physical allocation data</i> by <i>market participant</i> ‘k’ in metering interval ‘t’ of <i>settlement hour</i> ‘h’ up to the <i>generation unit’s minimum loading point</i>.</p> <p>CMSC_REV is calculated using the following rules:</p> <ol style="list-style-type: none"> 1) Real-time CMSC ($TD_{k,h,105^{m,t}}$) for the same interval is greater than zero. 2) If $MQSI_{k,h^{m,t}}$ and $\max(DQSI_{k,h^{m,t}}, AQEI_{k,h^{m,t}}) \geq MLP$, then $CMSC_REV_{k,h^{m,t}} = 0$. 3) In the case of a <i>constrained-off event</i>: <ol style="list-style-type: none"> a. If $MQSI_{k,h^{m,t}} < MLP$, then $CMSC_REV_{k,h^{m,t}} = TD_{k,h,105^{m,t}}$ b. If $MQSI_{k,h^{m,t}} \geq MLP$ and $\max(DQSI_{k,h^{m,t}}, AQEI_{k,h^{m,t}}) \leq MLP$, then $CMSC_REV_{k,h^{m,t}} = OP(EMP_{h^{m,t}}, MLP, BE) - OP(EMP, \max(DQSI_{k,h^{m,t}}, AQEI_{k,h^{m,t}}), BE)$. | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 4) In the case of a <i>constrained-on event</i> : a. If $MQSI_{k,h}^{m,t} < MLP$ and $\min(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) < MLP$, then $CMSC_REV_{k,h}^{m,t} = TD_{k,h,105}^{m,t}$ b. If $MQSI_{k,h}^{m,t} \leq MLP$ and $\min(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}) \geq MLP$, then $CMSC_REV_{k,h}^{m,t} = OP(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE) - OP(EMP_h^{m,t}, MLP, BE)$ (See applicable <i>market manual</i>) | | | | | | | | | |
| 1134 | Day-Ahead Linked Wheel Failure Charge | DA_LWFC _{k,h} | 9.3.8E | $MAX[(-1) * [(DA_LWSDk,hi) * MAX[0, (DA_PSk,hi - PD_PSk,hi)]], (RT_IFC_DALWk,hi + RT_EFC_DALWk,hi)]$ Where: $DA_LWSDk,hi,t = MAX[MAX(DA_DQSIk,hi,t - PD_DQSIk,hi,t, DA_DQSWk,hi,t - PD_DQSWk,hi,t), 0]$ | Hourly | Due IESO | N/A | 13 | 13 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $\left(\frac{EMP_{hm,t} + (PB_{IM}_{ht} - PD_{EMP}_{hm,t}) * MAX}{0} \left(\frac{DA_{DQSI}_{k,hi,t} - PD_{DQSI}_{k,hi,t}}{0} \right) \right) * MAX$ $\left(\frac{MAX(0, EMP_{hm,t})}{* MAX \left(\frac{DA_{DQSI}_{k,hi,t} - PD_{DQSI}_{k,hi,t}}{0} \right)} \right) \Bigg]_{-EFC_D}$ $\sum_{i,T} (-1) * MIN$ $MAX[0, \left(\frac{PD_{EMP}_{hm,t} - EMP_{hm,t} - PB_{EX}_{ht}}{0} \right) * MAX$ $\left(\frac{DA_{DQSW}_{k,hi,t} - PD_{DQSW}_{k,hi,t}}{0} \right) \left(\frac{MAX(0, PD_{EM}}{* MAX \left(\frac{DA_{DQ}}{PD_{DQ}} \right)} \right)$ <p>Where: 'T' is the set of 12 metering intervals 't' during settlement hour 'h'. 'I' is the set of all intertie metering points 'i'.</p> | | | | | | | | | | |
| 1135 | Day-Ahead Import Failure Charge | DA_IFC _{k,h} | 9.3.8B | $\sum_{i,T} (-1) * MIN MAX[0, OP(PD_{EMP}_{h^{m,t}}, DA_{DQSI}_{k,h^{i,t}}, DA_{BE}_{k,k^{i,t}}) -$ | Hourly | Due <i>IESO</i> | N/A | 13 | N/A | N/A | | | Subject to exemptions under the provisions of 9.3.8B.1.2 | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $OP(PD_EMP_h^{m,t}, PD_DQSI_{k,h}^{i,t}, DA_BE_{k,k}^{i,t}), (MAX(0, XPD_BE_{k,h}^{i,t} - XDA_BE_{k,h}^{i,t}), (MAX(0, PD_EMP_h^{m,t}) * DA_ISD_{k,h}^{i,t}))$ <p>Where: ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2. ‘T’ is the set of all <i>metering intervals</i> ‘t’ in <i>settlement hour</i> ‘h’. ‘I’ is the set of all <i>intertie metering points</i> ‘i’. $DA_ISD_{k,h}^{i,t} = MAX(DA_DQSI_{k,h}^{i,t} - PD_DQSI_{k,h}^{i,t}, 0)$ $XDA_BE_{k,h}^{i,t} = (-1) * [OP(0, DA_DQSI, DA_BE) - OP(0, PD_DQSI, DA_BE)]$ $XPD_BE_{k,h}^{i,t} = (-1) * [OP(0, DA_DQSI, PD_BE) - OP(0, PD_DQSI, PD_BE)]$</p> | | | | | | | | | | |
| 1136 | Day-Ahead Export Failure Charge | DA_EFC _{k,h} | 9.3.8D | $\sum^{I,T} (-1) * MINMAX[0, (-1) * OP(PD_EMP_h^{m,t}, DA_DQSW_{k,h}^{i,t}, DA_BL_{k,k}^{i,t}) - (-1) *$ | Hourly | Due <i>IESO</i> | N/A | N/A | 0 | 13 | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $OP(PD_EMP_h^{m,t}, PD_DQSW_{k,h}^{i,t}, DA_BL_{k,k}^{i,t}), (MAX(0, XDA_BL_{k,h}^{i,t} - XPD_BL_{k,h}^{i,t}), (MAX(0, XDA_BL_{k,h}^{i,t}))$ <p>Where: ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2. ‘T’ is the set of all <i>metering intervals</i> ‘t’ in <i>settlement hour</i> ‘h’. ‘I’ is the set of all <i>intertie metering points</i> ‘i’. $XDA_BL_{k,h}^{i,t} = [OP(0, DA_DQSW, DA_BL) - OP(0, PD_DQSW, DA_BL)]$ $XPD_BL_{k,h}^{i,t} = [OP(0, DA_DQSW, PD_BL) - OP(0, PD_DQSW, PD_BL)]$</p> | | | | | | | | | |
| 1137 | Intertie Offer Guarantee Reversal | <p>Context 1: IOG_REV_{k,h}</p> <p>Context 2: DA_IOG_{adj}_{k,h}ⁱ</p> | <p>9.3.8A.1.2 and 9.3.8A.7 to 9.3.8A.9</p> | <p>**CALCULATIONS FOR CHARGE TYPE 1137 END OCTOBER 12, 2011.</p> <p>NOTE: This <i>charge type</i> is used in two separate contexts as follows: Context 1: When a day-ahead Intertie Offer Guarantee and a real-time Intertie Offer Guarantee apply to the same import transaction, the lower of the two is reversed by this <i>charge type</i>.</p> | <p>Context 1: Hourly</p> <p>Context 2: Hourly, but reported on the last <i>trading day</i> of the <i>billing period</i></p> | <p>Context 1: Due <i>IESO</i></p> <p>Context 2: Due MP</p> | N/A | 13 | 13 | 13 | | | <p>Note: Context 1 and Context 2 can both be applied to the same import.</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $-1 \times TD_{k,h,c}^i$ Where: 'c' is <i>charge type</i> 130 or 1130 as the case may be such that: $TD_{k,h,c}^i = \text{MIN}(TD_{k,h,130}^i, TD_{k,h,1130}^i)$ Context 2: In cases where this <i>charge type</i> is used for the purposes of applying the intertie offer guarantee adjustment ($DA_IOG\{adj\}_{k,h}^i$), the <i>settlement amount</i> applied is $DA_IOG\{adj\}_{k,h}^i$ and is calculated as follows: $DA_IOG\{adj\}_{k,h}^i = \text{MAX}[0, IOG_FV_{k,h}^i - TD_{k,h,100}^i - \text{MAX}(TD_{k,h,1130}^i, TD_{k,h,130}^i) - TD_{k,h,105}^i]$ Where: $TD_{k,h,100}^i$, $TD_{k,h,1130}^i$, $TD_{k,h,130}^i$ and $TD_{k,h,105}^i$ are the <i>settlement amounts</i> for <i>charge types</i> 100, 1130, 130 and 105 respectively, that are applicable to <i>market participant</i> 'k' during <i>settlement hour</i> 'h' at <i>intertie metering point</i> 'i'. | | | | | | | | | |
| 1138 | Day-Ahead Fuel Cost Compensation Credit | DA_FCC _{k,h} | 9.4.7E | Manual entry as per 9.4.7E.2 | Hourly | Due MP | 13 | N/A | N/A | N/A | | | |
| 1139 | Intertie Failure Charge Reversal | IFC_REV _{k,h} | 9.3.8C.6 | **CALCULATIONS FOR CHARGE TYPE 1139 END OCTOBER 12, 2011. | Hourly | Due IESO | N/A | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>When a Day-Ahead Import Failure Charge and a Real-time Import Failure Charge apply to the same import transaction, the lower of the two is reversed by this <i>charge type</i>.</p> $-1 \times TD_{k,h,c}^i$ <p>Where: ‘c’ is <i>charge type</i> 135 or 1135 as the case may be such that: $TD_{k,h,c}^i = \text{MIN} (-1 \times TD_{k,h,135}^i, -1 * TD_{k,h,1135}^i)$</p> | | | | | | | | | |
| 1142 | Ontario Fair Hydro Plan Eligible RPP Consumer Discount Settlement Amount | N/A | N/A | <p>** CHARGE TYPE 1142 REPLACED BY CHARGE TYPE 142 EFFECTIVE NOVEMBER 1, 2019 **</p> <p>Manual entry based on:</p> <p>(1) the values submitted via on-line settlement forms “Regulated Price Plan vs. Market Price – Variance for Conventional Meters”, “Regulated Price Plan vs. Market Price – Variance for Smart Meters” and “Regulated</p> | Monthly | Due LDCs, Unit Sub-Meter Providers and eligible MPs either way | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Price Plan – Final Variance Settlement Amount”; or (2) For eligible IESO market participant consumers: $NEMSC_{k,H} - \{ \text{MIN} [TLQ , \Sigma H_{M,T} (AQEW_{k,hm,t} - AQEI_{k,hm,t} - \Sigma_s BCQ_{s,k,hm,t})] \times RPPI=1 + \text{MAX} [0, \Sigma H_{M,T} (AQEW_{k,hm,t} - AQEI_{k,hm,t} - \Sigma_s BCQ_{s,k,hm,t}) - TLQ] \times RPPI=2 \}$ | | | | | | | | | |
| 1143 | Ontario Fair Hydro Plan Eligible Non-RPP Consumer Discount Settlement Amount | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement form “Ontario Fair Hydro Plan (OFHP) for Eligible Non-RPP Customers”; | Monthly | Due LDCs, Unit Sub-Meter Providers and eligible MPs either way | 13 | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |
| 1144 | Ontario Fair Hydro Plan Financing Entity Amount | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement form “Ontario Fair Hydro Plan – Financing Entity Funding Expenses”; | Monthly | Due Financing Entity | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1145 | Ontario Fair Hydro Plan Financing Entity Interest | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement form “Ontario Fair Hydro Plan – Financing Entity Funding Expenses”; | Monthly | Due Financing Entity | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |
| 1148 | GA Energy Storage Injection Reimbursement | N/A | N/A | $U_k \times GARB$ | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Eligibility and other implementation details subject to government regulation. |
| 1188 | Day-Ahead Fuel Cost Compensation Debit | DA_FCC_U _{k,h} | 9.4.8.1.12 | $= \sum_{K,H,c,M,T} TD_c \times \left[\frac{(AQEW_{k,hm,t} + SQEW_{k,hi,t})}{\sum_{K,H,M,T} (AQEW_{k,hm,t} + SQEW_{k,hi,t})} \right]$ <p>Where: ‘c’ is charge type 1138. ‘K’ is the set of all market participants ‘k’. ‘M’ is the set of all delivery points ‘m’ and intertie metering points ‘i’. ‘H’ is the set of all settlement hours ‘h’ in the month.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 'T' is the set of all metering intervals 't' in the set of all settlement hours 'H'. | | | | | | | | | |
| 1192 | Ontario Fair Hydro Plan Eligible RPP Consumer Discount Balancing Amount | N/A | N/A | <p><u>** CHARGE TYPE 1192 REPLACED BY CHARGE TYPE 192 EFFECTIVE NOVEMBER 1, 2019 **</u></p> <p>$\Sigma KTDk,1142$</p> <p>Where 'K' is the set of all market participants 'k'.</p> <p>Where TDk,1142 is the total settlement amount of charge type 1142 for the month for market participant 'k'.</p> | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |
| 1193 | Ontario Fair Hydro Plan Eligible Non-RPP Consumer Discount Balancing Amount | N/A | N/A | <p>$\Sigma KTDk,1143$</p> <p>Where 'K' is the set of all <i>market participants</i> 'k'.</p> <p>Where TDk,1143 is the total <i>settlement amount</i> of charge type 1143 for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | Eligibility, rates, and other implementation details subject to government and OEB regulations. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1194 | Ontario Fair Hydro Plan Financing Entity Balancing Amount | N/A | N/A | $\Sigma KTDk,1144$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TDk,1144 is the total <i>settlement amount</i> of charge type 1144 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |
| 1195 | Ontario Fair Hydro Plan Financing Entity Balancing Interest | N/A | N/A | $\Sigma KTDk,1145$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TDk,1145 is the total <i>settlement amount</i> of charge type 1145 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |
| 1300 | Capacity Based Demand Response Program Availability Payment | N/A | N/A | **CALCULATIONS FOR CHARGE TYPE 1300 ENDED ON OCTOBER, 2018. $= HA_H \times MCMW_h \times AAR$ | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Settlement Amount | | | <p>Where:</p> <p>‘AAR’ means ‘Adjusted Availability Rate’.</p> <p>‘H’ is the total hours a DRMP is available in a program month.</p> <p>‘HA’ means ‘Hours of Availability’.</p> <p>‘MCMW’ means ‘Monthly Contracted MW’.</p> | | | | | | | | | |
| 1301 | Capacity Based Demand Response Program Availability Over-Delivery Settlement Amt | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1301 ENDED ON OCTOBER, 2018.</p> $= \sum_H (CMW_h - MCMW_h) \times AODR_h$ <p>Applicable only in response to an ‘Open Standby Notification’.</p> <p>Where:</p> <p>‘AODR’ means ‘Availability Over-Delivery Rate’.</p> <p>‘CMW’ means ‘Confirmed MW’.</p> <p>‘H’ is the set of all hours ‘h’ in the month where the ‘CMW’ exceeded the ‘MCMW’.</p> <p>‘MCMW’ means ‘Monthly Contracted MW’.</p> | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1302 | Capacity Based Demand Response Program Availability Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1302 ENDED ON OCTOBER, 2018.</p> <p>The charge to a DRMP is highest of A, B or C:</p> <p>A: Availability Set-Off (Reliability)</p> $= \sum_H \text{PSO}_h \times \text{AAR} \times \text{MCMW}_h$ <p>This formula applies when the Reliability Rate for a given Demand Response Account is less than 85% during any interval of an Activation Hour, or where the Participant is not Fully Available for Curtailment.</p> <p>Where:</p> <p>‘AAR’ and ‘MCMW’ have the same meaning as in CT1300.</p> <p>‘H’ is the set of all activation hours ‘h’ for the activation period.</p> <p>‘PSO’ means ‘Performance Set-Off Factor’ as described in the market manual.</p> <p>B: Availability Set-Off (Timely Confirmation)</p> $= \text{PSO} \times \text{AAR} \times \text{MCMW}_h \times \text{CDP}$ | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>This formula applies when the Participant, regardless of Activation, has failed to deliver, or delivers late, a Confirmation that is required by the IESO.</p> <p>Where: ‘AAR’ and ‘MCMW’ have the same meaning as in CT1300. ‘CDP’ (Contracted Dispatch Period) means four consecutive hours. Each Contracted Dispatch Period shall occur within the hours of Availability, and shall occur within and no more than once in accordance with the Daily Schedule. ‘PSO’ has the same meaning as defined above.</p> <p>C: Availability Set-Off (Low Confirmation) $= \sum_H (PSO \times AAR \times (MCMW_h - CMW))$</p> <p>This formula applies when the Confirmed MW’s are less than 95% of the Monthly Contracted MW for a Confirmed Hour of the Contracted Dispatch Period.</p> <p>Where:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | ‘AAR’ and ‘MCMW’ have the same meaning as in CT1300. ‘CMW’ has the same meaning as in CT1301. ‘H’ is the set of all confirmed hours ‘h’ when the Confirmed MW’s are less than 95% of the Monthly Contracted MW for the Contracted Dispatch Period. ‘PSO’ has the same meaning as defined above. | | | | | | | | | |
| 1303 | Capacity Based Demand Response Program Utilization Payment Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1303 ENDED ON OCTOBER, 2018.</p> $= [\sum_H (AAM_h \times UR_h)] - [\sum_H (NG_h \times \text{MIN}(HOEP, UR_h))]$ <p>Where: ‘AAM’ (Actual Activated MWh), means the number of MWh Curtailed by a Participant when requested by the IESO, as measured through the use of electricity meter(s). Curtailment shall not exceed the product of the Activation MW and the activation period requested by the IESO, plus the lesser of an additional 15% of the Activation MW per hour of the activation period, OR 15 MWh per hour of the activation period.</p> | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘H’ is the total hours ‘h’ a DRMP is activated in a program month.</p> <p>‘HOEP’ means Hourly Ontario Energy Price.</p> <p>‘NG’ (Net Generation), means the MWh of net electricity generated by any contributor that is a behind the meter generator.</p> <p>‘UR’ (Utilization Rate), means the rates, expressed in \$/MWh, as specified in the Demand Response Schedule.</p> | | | | | | | | | |
| 1304 | Capacity Based Demand Response Program Utilization Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1304 ENDED ON OCTOBER, 2018.</p> <p>The charge to a DRMP is highest of A, B or C:</p> <p>A: Utilization Set-Off (Reliability)</p> $= \sum_H PSO_h \times UR \times MCMW_h$ <p>This formula applies when the Reliability Rate for a given Demand Response Account is less than 85% during any interval of an Activation Hour.</p> <p>Where:</p> <p>‘H’ is the set of all activation hours ‘h’ for the activation period.</p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘PSO’ has the same meaning as in CT 1301.</p> <p>‘UR’ has the same meaning as in CT1303.</p> <p>‘MCMW’ has the same meaning as in CT1300.</p> <p>B: Utilization Set-Off (Timely Confirmation)</p> <p>= $PSO \times UR \times MCMW_h \times CDP$</p> <p>This formula applies when the DRMP, regardless of Activation, has failed to deliver, or delivers late, a Confirmation that is required by the <i>IESO</i>.</p> <p>Where:</p> <p>‘CDP’ (Contracted Dispatch Period) means four consecutive hours. Each Contracted Dispatch Period shall occur within the hours of Availability, and shall occur within and no more than once in accordance with the Daily Schedule.</p> <p>‘MCMW’ has the same meaning as defined above.</p> <p>‘PSO’ has the same meaning as defined above.</p> <p>‘UR’ has the same meaning as defined above.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>C: Utilization Set-Off (Low Confirmation)</p> $= \sum_H (\text{PSO} \times \text{UR} \times (\text{MCMW}_h - \text{CMW}))$ <p>This formula applies when the Confirmed MW's are less than 95% of the Monthly Contracted MW for a Confirmed Hour of the Contracted Dispatch Period.</p> <p>Where:</p> <p>'CMW' has the same meaning as in CT1301.</p> <p>'H' is the set of all confirmed hours 'h' when the Confirmed MW's are less than 95% of the Monthly Contracted MW for the Contracted Dispatch Period.</p> <p>'MCMW' has the same meaning as defined above.</p> <p>'PSO' has the same meaning as defined above.</p> <p>'UR' has the same meaning as defined above.</p> | | | | | | | | | | |
| 1305 | Capacity Based Demand Response Program Planned Non-Performance Event Set-Off Amt | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1305 ENDED ON OCTOBER, 2018.</p> <p>The Planned Non-Performance Availability Set-Off applies for any day for which a participant has requested a Non-Performance Event as part of either a Single Day Non-</p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>Performance Event or a part of an Extended Period Planned Non-Performance Event.</p> <p>The monthly set-off calculation is the sum of all:</p> <ol style="list-style-type: none"> 1. Non-Activation Day Non-Performance Availability Set-Offs and 2. Activation Day Non-Performance Availability Set-Offs. <p>For 1.) The Non-Activation Day Non-Performance Availability Set-Off amount is:</p> $= (AAR \times MCMW_h \times HANE_H)$ <p>Where:</p> <p>‘AAR’ has the same meaning as in CT1300.</p> <p>‘HANE’ (Hours of Availability for a Non-Performance Event), represents the Hours of Availability for all days in the contract month for which a planned Non-Performance Event is requested and for which an Activation Notice is not received by the participant.</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘MCMW’ has the same meaning as in CT1300.</p> <p>For 2.) The Activation Day Non-Performance Availability Set-Off amount is:</p> $= (OH \times AAR \times MCMW_h \times NEWF_H)$ <p>Where:</p> <p>‘AAR’ and ‘MCMW’ have the same meaning as in CT1300.</p> <p>‘OH’ (Opportunity Hours), means 64 if Option A is applicable to the Demand Response Account; or 32 if Option B is applicable to the Demand Response Account.</p> <p>‘NEWF’ (Non-Performance Event Weighting Factor), means 10%, unless the Actual Activated MWh per interval, as averaged over all of the Intervals in the Contracted Dispatch Period for the Activation, is greater than or equal to the product of the Monthly Contracted MW and 1/12 of an hour in which case ‘NEWF’ means 50%.</p> | | | | | | | | | |
| 1306 | Capacity Based Demand Response Program Measurement Data Set-Off Settlement Amt | N/A | N/A | <p>**<u>CALCULATIONS FOR CHARGE TYPE 1306 ENDED ON OCTOBER, 2018.</u></p> $= MDSF \times (HA_H \times MCMW_h \times AAR)$ | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>This formula applies when the complete set of weekly measurement data for a Demand Response Account are not received as per the CBDR Processing Timelines. The formula recovers a percentage of the availability payment for the applicable week.</p> <p>Where:</p> <p>‘MDSF’ (Measurement Data Set-Off Factor), is an increasing factor for every week that the full data remains undelivered. The factor is equal to:</p> <ul style="list-style-type: none"> • 20% for the first week that the full data remains undelivered; • 33% for the second week that the full data remains undelivered; • 50% for the third week that the full data remains undelivered; and • 100% for the fourth week that the full data remains undelivered. <p>‘AAR’, ‘HA’ and ‘MCMW’ have the same meaning as in CT1300.</p> <p>‘H’ is the total hours a DRMP is available for the applicable week.</p> | | | | | | | | | |
| 1307 | Capacity Based Demand Response Program Buy- | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1307 ENDED ON OCTOBER, 2018.</p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Down Settlement Amount | | | <p>Buy-Down means the act by the DRMP chooses to reduce its Monthly Contracted MW and/or remove up to three Daily Schedules from participation in CBDR.</p> <p>For the Buy-Down of Monthly Contracted MW the payment is: $= (\text{MCMWR} \times \text{BDR} \times \text{HAE})$</p> <p>Where: ‘MCMWR’ (Monthly Contracted MW Reduction), means the MW of demand reduction in the Monthly Contracted MWs. ‘BDR’ (Buy-Down Rate), means the Buy-Down Rate, expressed in \$/MW. ‘HAE’ (Hours of Availability Elapsed), means the number of Hours of Availability that have elapsed in the Schedule Term up to the date that the reduction takes effect.</p> <p>For the Buy-Down of the Daily Schedules the payment is: $= (\text{MCMW} \times \text{RD} \times \text{BDR} \times \text{HAE})$</p> <p>Where: ‘BDR’ has the same meaning as defined above.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘HAE’ has the same meaning as defined above.</p> <p>‘MCMW’ has the same meaning as in CT1300.</p> <p>‘RD’ (Requested Days), means the number of Business Days per week from which the Hours of Availability are to be removed.</p> | | | | | | | | | |
| 1308 | Capacity Based Demand Response Program Performance Breach Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1308 ENDED ON OCTOBER, 2018.</p> <p>Performance breach amounts are calculated as defined in the market manual.</p> | Monthly | Either way | 13 | N/A | N/A | N/A | | | |
| 1309 | Demand Response Pilot – Availability Payment | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1309 ENDED ON APRIL, 2018.</p> <p>Calculated as per demand response pilot contracts.</p> | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Demand Response Pilot |
| 1310 | Demand Response Pilot – Availability Clawback | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1310 ENDED ON APRIL, 2018.</p> <p>Calculated as per demand response pilot contracts.</p> | Hourly | Due IESO | 13 | N/A | N/A | N/A | | | Demand Response Pilot |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1311 | Demand Response Pilot – Availability Charge | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1311 ENDED ON APRIL, 2018.</p> <p>Calculated as per demand response pilot contracts.</p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Demand Response Pilot |
| 1312 | Demand Response Pilot – Availability Adjustment | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1312 ENDED ON APRIL, 2018.</p> <p>Calculated as per demand response pilot contracts.</p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Demand Response Pilot |
| 1313 | Demand Response Pilot – Demand Response Bid Guarantee | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1313 ENDED ON APRIL, 2018.</p> <p>Calculated as per demand response pilot contracts.</p> <p>Notes:</p> <ul style="list-style-type: none"> - Bid guarantee as a payment is Due MP; bid guarantee as a clawback is Due IESO. <p>Bid guarantee is calculated per unit commitment period/event.</p> | Monthly | Either Way | 13 | N/A | N/A | N/A | | | Demand Response Pilot |
| 1314 | Capacity Obligation – Availability Payment | CAAP ^m _k | 9.4.7J.1 | $\sum H C C O m_{k,h} \times C A C P^z_h$ | Monthly | Due MP | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where: 'H' is the set of all <i>settlement hours</i> within the <i>availability window</i> of all <i>business days</i> in the relevant <i>energy market billing period</i> . | | | | | | | | | |
| 1315 | Capacity Obligation – Availability Charge | CAAC ^{m_k} | 4.7J.2.1 | In regards to a <i>capacity market participant</i> participating with an <i>hourly demand response resource</i> or a <i>capacity dispatchable load resource</i> : $\sum_H (-1) \times \text{Max}(0, (\text{CCO}^{m_{k,h}} - \text{DREBQ}^{m_{k,h}})) \times \text{CACP}^z_h \times \text{CNPF}_{tm}$ Where: (a) 'H' is the set of all <i>settlement hours</i> within the <i>availability window</i> during the relevant <i>trading day</i> ; (b) If the <i>capacity market participant</i> did not submit a <i>demand response energy bid</i> for its <i>hourly demand response resource</i> or | Daily | Due IESO | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>capacity dispatchable load resource</i>, as the case may be, for <i>settlement hour</i> ‘h’ in the day-ahead commitment process or failed to maintain such <i>energy bid</i> through the <i>real-time energy market</i>, $DREBQ^{m}_{k,h} = 0$;</p> <p>(c) In regards to <i>hourly demand response resource</i>, if the <i>demand response energy bids</i> submitted for <i>settlement hour</i> ‘h’ does not form part of <i>energy bids</i> spanning at least four consecutive <i>settlement hours</i>, $DREBQ^{m}_{k,h} = 0$;</p> <p>(d) If the <i>demand response energy bid</i> submitted in the day-ahead commitment process for <i>settlement hour</i> ‘h’ is not equal to the <i>demand</i></p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p><i>response energy bid</i> submitted in the <i>real-time market</i> for the same <i>settlement hour</i>, $DREBQ_{k,h}^m$ shall be equal to the lesser of the two <i>demand response energy bids</i>; and</p> <p>Notwithstanding any of the foregoing, $DREBQ_{k,h}^m$ shall not exceed the $CARC_k^m$ for the <i>hourly demand response resource</i> or <i>capacity dispatchable load resource</i>, as the case may be.</p> <p>In regards to a <i>capacity market participant</i> participating with a <i>capacity generation resource</i>, <i>system-backed capacity import resource</i>, <i>generator-backed capacity import resource</i> or <i>capacity storage resource</i>:</p> $\sum_H (-1) \times \text{Max}(0, (CCO_{k,h}^m - CAEO_{k,h}^m)) \times CACP_h^z \times CNPF_{tm}$ <p>Where:</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>(a) ‘H’ is the set of all <i>settlement hours</i> within the <i>availability window</i> during the relevant <i>trading day</i>;</p> <p>(b) If the <i>capacity market participant</i> did not submit an <i>energy offer</i> in the day-ahead commitment process or maintain such <i>energy offer</i> in accordance with the applicable <i>market manual</i> for <i>settlement hour ‘h’</i>, $CAEO^{m_{h,k}} = 0$;</p> <p>(c) If the <i>energy offer</i> submitted in the day-ahead commitment process for <i>settlement hour ‘h’</i> is not equal to the <i>energy offer</i> submitted in the <i>pre-dispatch hour</i> for the same <i>settlement hour</i>, $CAEO^{m_{h,k}}$ shall be equal to the lesser of the two <i>energy offers</i>;</p> <p>(d) If a <i>capacity storage resource</i> receives a non-zero <i>energy dispatch instruction</i> within the relevant</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <i>availability window</i> , the $CAEO^{m,h,k}$ for the remaining <i>settlement hours</i> of the <i>availability window</i> after receiving such non-zero <i>energy dispatch instruction</i> shall be equal to the <i>energy offer</i> applicable to the <i>settlement hour</i> in which they receive such non-zero <i>energy dispatch instruction</i> . | | | | | | | | | |
| 1316 | Capacity Obligation – Administration Charge | CAADM ^{m,k} | 4.7J.2.3 | $(-1) \times CAAP^{m,k}$ Where: ‘CAAP ^{m,k} ’ is the <i>capacity auction availability payment settlement amount</i> , calculated in accordance with section 4.7J.1, for <i>capacity market participant ‘k’</i> at <i>delivery point</i> or <i>intertie metering point ‘m’</i> for the relevant <i>energy market billing period</i> . | Monthly | Due IESO | 13 | 13 | N/A | N/A | | | |
| 1317 | Capacity Obligation – Dispatch Charge | CADC ^{m,k} | 4.7J.2.2 | $(-1) \times DRSQty^{m,k,h} \times CACP^z_h \times CNPF_{tm}$ Where: | Hourly | Due IESO | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>(a) ‘h’ is a <i>settlement hour</i> in which the <i>hourly demand response resource</i> failed to comply with its activation notice, as determined in accordance with the applicable <i>market manual</i>.</p> <p>(b) ‘tm’ is the <i>energy market billing period</i> that corresponds to <i>settlement hour</i> ‘h’.</p> | | | | | | | | | |
| 1318 | Capacity Obligation – Capacity Charge | CACC ^{m_k} | 9.7J.2.4 | $(-1) \times CAAP^{m_k}$ Where: ‘CAAP ^{m_k} ’ is the <i>capacity auction availability payment settlement amount</i> , calculated in accordance with section 4.7J.1, for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> or <i>intertie metering point</i> ‘m’ for the relevant <i>energy market billing period</i> . | Monthly | Due IESO | 13 | 13 | N/A | N/A | | | |
| 1319 | Capacity Obligation – Buy-Out Charge | CABOC ^{m_k} | 9.4.7J.3 | $= 50\% \times \sum H CBOC^{m_k} \times CACP^{m_k} \times (1 - CNPF_{tm})$ Where: | Monthly | Due IESO | 13 | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>(a) ‘H’ is the set of all <i>settlement hours</i> within the <i>availability window</i> of all <i>trading days</i> from the buy-out effective date to the end of the <i>commitment period</i>.</p> <p>(b) ‘tm’ is the <i>energy market billing period</i> that corresponds to the relevant <i>settlement hour</i>.</p> | | | | | | | | | |
| 1320 | Capacity Obligation – Dispatch Test Payment and Emergency Activation Payment | CATAP ^{m_{k,h}} and CAEOP ^{m_{k,h}} | 9.4.7J.5 | <p>For capacity auction dispatch test activations: $HDRTAPR \times HDRDC^{m_{k,h}}$</p> <p>For emergency operating state activations: $Max(0, HDRBP^{m_{k,h}} - Max(0, HOEP_h)) \times HDRDC^{m_{k,h}}$</p> | Hourly | Due MP | 13 | 13 | N/A | N/A | | | |
| 1321 | Capacity Obligation – Capacity Import Call Failure Charge | CACIF ^{m_k} | 9.4.7J.2.7 | <p>$(-1) \times CAAP^{m_k}$</p> <p>Where: ‘CAAP^{m_k}’ is the <i>capacity auction availability payment settlement amount</i>, calculated in accordance</p> | Monthly | Due IESO | N/A | 13 | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | with section 4.7J.1, for <i>capacity market participant ‘k’ at delivery point or intertie metering point ‘m’</i> for the relevant <i>energy market billing period</i> . | | | | | | | | | |
| 1322 | Capacity Obligation – Capacity Deficiency Charge | CACD _k ⁱ | 9.4.7J.2.8 | $\sum^H (-1.5) \times OCMW_k^i \times CACP_h^z$ Where: ‘H’ is the set of all <i>settlement hours</i> within the <i>availability window</i> of all <i>trading days</i> within the relevant <i>energy market billing period</i> . | Monthly | Due IESO | N/A | 13 | N/A | N/A | | | |
| 1323 | Capacity Obligation – In-Period Cleared UCAP Adjustment Charge | CAIPAM _k ^m | 9.4.7J.2.9 | $(-1 \times \text{Max}(0, (CAAP_k^m \times (UCAP \text{ Adjustment}) + \sum^H CAAC_{k,h}^m)))$ Where: a. CAAP _k ^m is the <i>capacity obligation availability payment settlement amount for capacity market participant ‘k’ at delivery point ‘m’</i> for the relevant <i>energy market billing period</i> , | Monthly | Due IESO | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>as calculated pursuant to section 4.7J.1.</p> <p>b. $CAAC_{k,h}^m$ is the <i>capacity obligation availability charge settlement amount</i> for <i>capacity market participant 'k' at delivery point 'm' for settlement hour 'h'</i>, as calculated pursuant to section 4.7J.2.1.</p> <p>c. 'H' is the set of all <i>settlement hours 'h'</i> within the <i>availability window</i> of the relevant <i>energy market billing period</i>.</p> <p>d. 'UCAP Adjustment' is a de-rate (in %) based on the <i>hourly demand response resource's delivered performance during a capacity auction capacity test</i>, as determined in accordance with the applicable <i>market manual</i>. If the <i>capacity market participant</i> has filed a <i>notice of disagreement</i> in regards to the outcomes of the <i>capacity</i></p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>auction capacity test</i> in accordance with section 6.8 of Chapter 9 of the <i>market rules</i>, and but for filing such <i>notice of disagreement</i> the <i>capacity market participant</i> would have forfeited any of its <i>capacity obligation</i> pursuant to section 19.4.18 of Chapter 7 of the <i>market rules</i>, then the UCAP Adjustment shall equal 100%.</p> | | | | | | | | | |
| 1324 | Capacity Obligation – Availability Charge True-up Payment | CAACT ^{m_k} | 9.4.7J.6 | <p> $(\text{Min } ((-1) \times \sum \text{TM} ((\sum \text{D CAAC}^{\text{m}}_{\text{k}}) + \text{UCAP Adjustment} \times \text{CAAP}^{\text{m}}_{\text{k}} + \text{CAIPA}^{\text{m}}_{\text{k}}), \sum \text{H Max } (0, (\text{RAC}_{\text{k}} - \text{CCO}_{\text{k,h}}) \times \text{CACP}_h \times \text{CNP}_{\text{tm}}))$ </p> <p>Where:</p> <p>(a) CAAC^{m_k} is the <i>capacity obligation availability charge settlement amount</i> for <i>capacity market participant ‘k’</i> at <i>delivery</i></p> | | Due IESO | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>point ‘m’ for the relevant trading day, as calculated as the sum of the capacity obligation availability charge settlement amount of each settlement hour within the relevant availability window determined pursuant to section 4.7J.2.1;</i></p> <p>(b) ‘UCAP Adjustment’ is a de-rate (in %) based on the <i>hourly demand response resource’s</i> delivered performance during a <i>capacity auction capacity test</i> performed during the relevant <i>obligation period</i>, as determined in accordance with the applicable <i>market manual</i>;</p> <p>(c) $CAAP^m_k$ is the <i>capacity obligation availability payment settlement amount for capacity market participant ‘k’ at</i></p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>delivery point ‘m’ for the relevant energy market billing period, as calculated pursuant to section 4.7J.1 of Chapter 9 of the market rules;</i></p> <p>(d) $CAIPAM_k$ is the <i>capacity obligation in-period cleared UCAP adjustment charge settlement amount for capacity market participant ‘k’ at delivery point ‘m’ for the relevant energy market billing period, as calculated pursuant to section 4.7J.2.9 of Chapter 9 of the market rules;</i></p> <p>(e) ‘D’ is the set of all <i>trading days</i> within the relevant <i>energy market billing period</i>;</p> <p>(f) ‘tm’ is the <i>energy market billing periods</i> associated with <i>settlement hour ‘h’</i></p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | within the relevant <i>obligation period</i> ; (g) ‘TM’ is the set of all <i>energy market billing periods</i> within the relevant <i>obligation period</i> ; and (h) ‘H’ is the set of all <i>settlement hours ‘h’</i> within the <i>availability window</i> of the relevant <i>obligation period</i> . | | | | | | | | | |
| 1325 | Capacity Obligation – Capacity Auction Charges True-up Payment | CACT ^m _k | 9.4.7J.7 | $-1 \times \text{Min} (0, (\sum_H \text{TD}_{C,k,h^m} + \sum_H \text{TD}_{P,k,h^m}))$ <p>(a) TD_{C,k,h^m} is the total dollar value of all <i>settlement amounts ‘C’</i> for <i>capacity market participant ‘k’</i> at <i>delivery point ‘m’</i> in <i>settlement hour ‘h’</i> in the relevant <i>obligation period</i>, where:</p> <p>a. ‘C’ is the set of the <i>settlement amounts</i></p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>applied in accordance with MR Ch. 9 ss. 4.7J.2.1, 4.7J.2.1A, 4.7J.2.3, 4.7J.2.4, 4.7J.2.5, 4.7J.2.6, 4.7J.2.7, 4.7J.2.8, and 4.7J.2.9.</p> <p>(b) TD_{P,k,h^m} is the total dollar value of all <i>settlement amounts</i> 'P' for <i>capacity market participant</i> 'k' at <i>delivery point</i> 'm' in <i>settlement hour</i> 'h' in the relevant <i>obligation period</i>, where:</p> <p>a. 'P' is the set of the <i>settlement amounts</i> applied in accordance with MR Ch. 9 ss. 4.7J.1 and 4.7J.6</p> <p>(c) 'H' is the set of all <i>settlement hours</i> 'h' within the <i>availability window</i> of</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | the relevant <i>obligation period</i> . | | | | | | | | | |
| 1330 | On behalf of the former OPA for the DR2 Program - Availability Payment Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1330 ENDED ON FEBRUARY 28, 2015.</p> $= \sum_H \text{CoMW}_h \times \text{AR} \times \text{ILSR}$ <p>Where: ‘CoMW’ (Contracted MW), means the MW specified in the DR2 Schedule(s) for a given Settlement Account which the Participant agrees to Load Shift in each On-Peak Contract hour. ‘AR’ (Availability Rate), means the availability rate, expressed in \$/MW, in the amount as specified by the OPA from time to time on the OPA Website pursuant to the DR2 Program Rules. ‘H’ is the total On-Peak contract hours in a Contract Month. ‘ILSR’ (Implied Load Shift Ratio), has the meaning as defined in</p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>OPA’s DR2 Program Rules and is calculated as follows:</p> $\text{ILSR} = (-1) \times [\text{Implied Load Shift} - ((3/4)(\text{Load Shift Credit}))] / \text{Implied Load Shift Requirement}$ | | | | | | | | | |
| 1331 | On behalf of the former OPA for the DR2 Program - Availability Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1331 ENDED ON FEBRUARY 28, 2015.</p> <p>The charge to a DR participant is the highest of amounts A, B or C plus amount D; where A, B and C cannot occur within an on-peak period that was subject to D.</p> <p>A: Availability Set-Off (Reliability)</p> $= \sum_H \text{PSO}_h \times \text{AR} \times \text{CoMW}_h \times \text{ILSR}$ <p>This formula applies when the Actual MW Reliability Ratio for a given Settlement Account is less than 95% during the Summer and Winter seasons and less than 90% during the shoulder seasons.</p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA Program Rules. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>The Actual MW Reliability Ratio, which shall not be greater than 100%, shall be calculated as follows:</p> <ul style="list-style-type: none"> - For each On-Peak Contract Hour, the Actual MW Reliability Ratio is defined as the result of the baseline MW minus the actual MW divided by the confirmed MW. <p>‘PSO’ (Performance Set-Off Factor) refers to a set of factors defined in the OPA DR2 Program Rules.</p> <p>‘AR’ has the same meaning as in CT1330.</p> <p>‘CoMW’ has the same meaning as in CT1330.</p> <p>‘H’ is the set of all hours ‘h’ in the On-Peak Contract period where the required reliability is not met.</p> <p>‘ILSR’ has the same meaning as in CT1330.</p> <p>B: Availability Set-Off (Timely Confirmation)</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>= $PSO \times AR \times CoMW_h \times H \times ILSR$</p> <p>This formula applies when the Participant has failed to deliver, or delivers late, a Confirmation that is required by the IESO pursuant to the DR2 Program Rules.</p> <p>Where: ‘PSO’ has the same meaning as defined above. ‘AR’ has the same meaning as in CT1330. ‘CoMW’ has the same meaning as in CT1330. ‘H’ is the set of all hours in the On-Peak Contract period. ‘ILSR’ has the same meaning as in CT1330.</p> <p>C: Availability Set-Off (Low Confirmation)</p> <p>= $\sum_H PSO \times AR \times (CoMW_h - CMW) \times ILSR$</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>This formula applies when the Confirmed MW is less than the product of the Required Reliability Ratio and the Contracted MW for one or more On-Peak Contract hours.</p> <p>Where: ‘PSO’ has the same meaning as defined above. ‘AR’ has the same meaning as in CT1330. ‘CoMW’ has the same meaning as in CT1330. ‘CMW’ (Confirmed MW) means the number of MW available to shift by the Participant. ‘H’ is the set of all confirmed hours ‘h’ when the Confirmed MW’s are: - Less than 95% during the Summer and Winter seasons or - Less than 90% during the shoulder seasons of the Contracted MW. ‘ILSR’ has the same meaning as in CT1330.</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>D: Availability Set-Off (Non-Performance) $= PSO \times AR \times CoMW_h \times H \times ILSR$</p> <p>This formula applies when the Participant has taken an Extended Planned Non-Performance Event or Single Day Planned Non-Performance Event.</p> <p>Where: ‘PSO’ has the same meaning as defined above. ‘AR’ has the same meaning as in CT1330. ‘CoMW’ has the same meaning as in CT1330. ‘H’ is the set of all hours in the On-Peak Contract period. ‘ILSR’ has the same meaning as in CT1330.</p> | | | | | | | | | |
| 1332 | On behalf of the former OPA for the DR2 Program - Utilization Payment Settlement Amount | N/A | N/A | <p>**<u>CALCULATIONS FOR CHARGE TYPE 1332 ENDED ON FEBRUARY 28, 2015.</u></p> <p>The monthly Utilization Payment to a DR2 participant is the sum of the</p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>weekly utilization payments for the contract month and calculated as follows:</p> <p>Weekly Utilization payment</p> $= \sum_p \text{Max} \left[\left(\frac{\text{GHDiff}}{\text{AHDiff}} - 1 \right), 0 \right]$ $\times \text{Min} \left[\left(\text{CoMWh} \times 1.15 \right), \left(\text{Curt}_p \right) \right] \times \text{ILSR}$ <p>Where:</p> <p>‘GHDiff’ (Guaranteed weekly HOEP Differential), means the weekly differential rate, expressed in \$/MWh, as specified by the <i>OPA</i></p> <p>‘AHDiff’ (Actual weekly HOEP Differential), is equal to the average actual HOEP for all hours of the useable On-Peak Contract Periods in the Week less the average actual HOEP for all hours in the Off-Peak Period for the same Week.</p> <p>‘CoMWh’ (Contracted MWh), means the MWh specified in the DR2 Schedule(s) for a given Settlement Account which the Participant agrees</p> | | | | | | | | | statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | to Load Shift in each On-Peak Contract Period. ‘Curt’ (Curtailment), means the number of MWh Curtailed by a Participant for each useable on-peak contract period, and shifted to the off-peak period as measured through the use of electricity meter(s). ‘P’ is the total number of On-Peak Contract Periods ‘p’ for a Participant in a Contract Week ‘ILSR’ has the same meaning as in CT1330. | | | | | | | | | |
| 1333 | On behalf of the former OPA for the DR2 Program - Utilization Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1333 ENDED ON FEBRUARY 28, 2015.</p> <p>The charge to a DR participant is highest of A, B or C where A, B and C cannot occur within an on-peak period that was subject to an Availability Set-Off (Non-Performance) event:</p> <p>A: Utilization Set-Off (Reliability)</p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $= \sum_p \text{PSO} \times \text{Max}[(\text{GHDiff} - \text{AHDiff}), 0] \times \text{CoMWh}_p \times \text{ILSR}$ <p>This formula applies when the Actual MWh Reliability Ratio for a given Settlement Account is less than 95% during the Summer and Winter seasons and less than 90% during the shoulder seasons.</p> <p>The Actual MWh Reliability Ratio, which shall not be greater than 100%, shall be calculated as follows:</p> <ul style="list-style-type: none"> - For each On-Peak Contract Period, the Actual MWh Reliability Ratio is defined as the result of the baseline MWh minus the actual MWh divided by the product of the confirmed MW and the On-Peak Contract Hours. <p>Where: 'PSO' (Performance Set-Off Factor) refers to a set of factors defined in the OPA's Program Rules.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘GHDiff’ has the same meaning as in CT1332. ‘AHDiff’ has the same meaning as in CT1332. ‘CoMWh’ has the same meaning as in CT1332. ‘P’ is the total number of On-Peak Contract Periods ‘p’ for a Participant in a Contract Month. ‘ILSR’ has the same meaning as in CT1330.</p> <p>B: Utilization Set-Off (Timely Confirmation)</p> $= \sum_p \text{PSO} \times \text{Max}[(\text{GHDiff} - \text{AHDiff}), 0] \times \text{CoMWh}_p \times \text{ILSR}$ <p>This formula applies when the Participant has failed to deliver, or delivers late, a Confirmation that is required by the IESO pursuant to the DR2 Program Rules.</p> <p>Where:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘PSO’ has the same meaning as defined above.</p> <p>‘GHDiff’ has the same meaning as in CT1332.</p> <p>‘AHDiff’ has the same meaning as in CT1332.</p> <p>‘CoMWh’ has the same meaning as in CT1332.</p> <p>‘P’ is the total such On-Peak Contract Periods ‘p’ for a Participant in a Contract Month when the Participant has failed to deliver, or delivers late, a Confirmation.</p> <p>‘ILSR’ has the same meaning as in CT1330.</p> <p>C: Utilization Set-Off (Low Confirmation)</p> $= \sum_p \text{PSO} \times \text{Max} [(\text{GHDiff} - \text{AHDiff}), 0] \times (\text{CoMWh} - \text{CMWh}_p) \times \text{ILSR}$ <p>This formula applies when the Confirmed MWh are less than the product of the Required Reliability</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Ratio and the Contracted MWh for an On-Peak Contract Period. Where: ‘PSO’ has the same meaning as defined above. ‘GHDiff’ has the same meaning as in CT1332. ‘AHDiff’ has the same meaning as in CT1332. ‘CoMWh’ has the same meaning as in CT1332. ‘CMWh’ (Confirmed MWh) means the MWh available confirmed for shifting by the Participant. ‘P’ is the total such On-Peak Contract Periods ‘p’ for a Participant in a Contract Month. ‘ILSR’ has the same meaning as in CT1330. | | | | | | | | | |
| 1334 | On behalf of the former OPA for the DR2 Program – Meter Data Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1334 ENDED ON FEBRUARY 28, 2015.</p> $= \text{MDSF} \times (\text{TD}_{k,1330} / \text{NoW}_k)$ | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>This formula applies when the complete set of weekly meter data for a Settlement Account is not received by 15:00 EST on the first Business Day of the following week. The formula recovers a percentage of the Availability Payment, as pro-rated for that week in question.</p> <p>Where:</p> <p>‘MDSF’ (Meter Data Set-Off Factor), is an increasing factor for every week that the full data remains undelivered. The factor is equal to:</p> <ul style="list-style-type: none"> - 20% for the first week that the full data remains undelivered; - 33% for the second week that the full data remains undelivered; - 50% for the third week that the full data remains undelivered; and - 100% for the fourth week that the full data remains undelivered. <p>$TD_{k,1330}$ is the <i>settlement amount of charge type 1330</i> for month ‘k’ for the DR2 participant.</p> | | | | | | | | | statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘NoW’ (Number of Weeks) means the number of Weeks contained in the Contract month.</p> <p>‘k’ is the Contract month.</p> | | | | | | | | | |
| 1335 | On behalf of the former OPA for the DR2 Program - Buy-Down Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1335 ENDED ON FEBRUARY 28, 2015.</p> <p>Buy-Down means the act by the Participant of reducing its Contracted MW and/or the number of On-Peak Contract hours from participation in DR2.</p> <p>For the Buy-Down of Seasonal Contracted MW the payment is: $= (SCMWR \times BDR \times CHE)$</p> <p>Where: ‘SCMWR’ (Seasonal Contracted MW Reduction), means the MW of demand reduction in the Seasonal Contracted MWs. ‘BDR’ (Buy-Down Rate), means the Buy-Down Rate, expressed in \$/MW.</p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>‘CHE’ (on-peak Contract Hours Elapsed), means the number of On-Peak Contract Hours that have elapsed in the Schedule Term up to the date that the reduction takes effect.</p> <p>For the Buy-Down of the number of On-Peak Contract hours, the payment is: $= (\text{CoMW} \times \text{PRCH} \times \text{BDR} \times \text{CHE})$</p> <p>Where: ‘CoMW’ has the same meaning as in CT1330. ‘PRCH’ (Percent Reduction in Contract Hours), means the percent reduction in On-Peak Contract Hours requested. ‘BDR’ has the same meaning as defined above. ‘CHE’ has the same meaning as defined above.</p> | | | | | | | | | | |
| 1336 | On behalf of the former OPA for the DR2 Program - | N/A | N/A | <p>**<u>CALCULATIONS FOR CHARGE TYPE 1336 ENDED ON FEBRUARY 28, 2015.</u></p> | Monthly | Due DR2-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Miscellaneous Settlement Amount | | | Reserved for DR2 payments or charges of a miscellaneous nature not specifically covered under Charge Types 1330 through 1335. | | | | | | | | | settled on the February 2015 settlement statements and invoice. |
| 1340 | On behalf of the former OPA for the DR3 Program – Availability Payment Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1340 ENDED ON APRIL 30, 2015.</p> <p>= $HA_H \times MCMW_h \times AAR$</p> <p>Where: ‘HA’ (Hours of Availability), means those hours within which a Participant shall maintain a Contracted Dispatch Period to be available for potential Curtailment of that Participant’s Monthly Contracted MW. ‘MCMW’ (Monthly Contracted MW), means the MW of demand reduction capacity for a specific Contract Month as identified in one or more DR3 Contact Schedule(s). ‘AAR’ (Adjusted Availability Rate), means an amount equal to the Availability Rate, expressed in \$/MWh, as increased by the</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Availability Premium or as decreased by the Availability Discount, as the case may be. ‘H’ is the total hours a Participant is available in a Contract Month. | | | | | | | | | |
| 1341 | On behalf of the former OPA for the DR3 Program – Availability Over-Delivery Settlement Amt | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1341 ENDED ON APRIL 30, 2015.</p> $= \sum_H (CMW_h - MCMW_h) \times AODR_h$ <p>Applicable only in response to an open standby notification.</p> <p>Where: ‘CMW’ (Confirmed MW), means the number of MW available for Curtailment by the Participant. ‘CMW’ is limited to the lesser of the Monthly Contracted MW plus 15 MW and 130% of the Monthly Contracted MW. ‘MCMW’ has the same meaning as in CT1340.</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘AODR’ (Availability Over-Delivery Rate), means the over-delivery rate as specified by the <i>OPA</i>.</p> <p>‘H’ is the set of all hours ‘h’ in the Contract month where the ‘CMW’ exceeded the ‘MCMW’.</p> | | | | | | | | | |
| 1342 | On behalf of the former OPA for the DR3 Program – Availability Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1342 ENDED ON APRIL 30, 2015.</p> <p>The charge to a DR participant is highest of A, B or C:</p> <p>A: Availability Set-Off (Reliability)</p> $= \sum_H \text{PSO}_h \times \text{AAR} \times \text{MCMW}_h$ <p>This formula applies when the Reliability Rate for a given Settlement Point is less than 85% during any meter interval of an Activation Hour, or where the Participant is not Fully Available for Curtailment as defined in the <i>OPA</i> DR3 Program Rules.</p> <p>Where:</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former <i>OPA</i> DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>For each metered interval, the Reliability Rate at a settlement point is defined as the actual reduction divided by the requested reduction; however, the Reliability Rate cannot exceed 100%.</p> <p>‘PSO’ (Performance Set-Off Factor) refers to a set of factors defined in the <i>OPA</i> DR3 Program Rules.</p> <p>‘AAR’ has the same meaning as in CT1340.</p> <p>‘MCMW’ has the same meaning as in CT1340.</p> <p>‘H’ is the set of all activation hours ‘h’ for the activation period.</p> <p>B: Availability Set-Off (Timely Confirmation)</p> <p>= $PSO \times AAR \times MCMW_h \times CDP$</p> <p>This formula applies when the Participant, regardless of Activation, has failed to deliver, or delivers late, a Confirmation that is required by the <i>IESO</i> pursuant to the DR3 Program Rules.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Where: ‘CDP’ (Contracted Dispatch Period) means four consecutive hours. Each Contracted Dispatch Period shall occur within the hours of Availability, and shall occur within and no more than once in accordance with the Daily Schedule. ‘PSO’ has the same meaning as defined above. ‘AAR’ has the same meaning as in CT1340. ‘MCMW’ has the same meaning as in CT1340.</p> <p>C: Availability Set-Off (Low Confirmation) $= \sum_H (PSO \times AAR \times (MCMW_h - CMW))$</p> <p>This formula applies when the Confirmed MW’s are less than 95% of the Monthly Contracted MW for a Confirmed Hour of the Contracted Dispatch Period.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>Where:</p> <p>‘PSO’ has the same meaning as defined above.</p> <p>‘AAR’ has the same meaning as in CT1340.</p> <p>‘MCMW’ has the same meaning as in CT1340.</p> <p>‘CMW’ has the same meaning as in CT1341.</p> <p>‘H’ is the set of all confirmed hours ‘h’ when the Confirmed MW’s are less than 95% of the Monthly Contracted MW for the Contracted Dispatch Period.</p> | | | | | | | | | | |
| 1343 | On behalf of the former OPA for the DR3 Program – Utilization Payment Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1343 ENDED ON APRIL 30, 2015.</p> $= [\sum_H (\text{Curt}_h \times \text{UR}_h)] - [\sum_H (\text{NG}_h \times \text{MIN}(\text{HOEP}, \text{UR}_h))]$ <p>Where:</p> <p>‘Curt’ (Curtailment), means the number of MWh Curtailed by a Participant when requested by the</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p><i>IESO</i>, as measured through the use of electricity meter(s). Curtailment shall not exceed the product of the Activation MW and the activation period requested by the <i>IESO</i>, plus the lesser of an additional 15% of the Activation MW per hour of the activation period, OR 15 MWh per hour of the activation period.</p> <p>‘UR’ (Utilization Rate), means the rates, expressed in \$/MWh, as specified by the <i>OPA</i>.</p> <p>‘NG’ (Net Generation), means the MWh of net electricity generated by any contributor that is a behind the meter generator.</p> <p>‘H’ is the total hours ‘h’ a Participant is activated in a Contract Month.</p> | | | | | | | | | |
| 1344 | On behalf of the former OPA for the DR3 Program – Utilization Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1344 ENDED ON APRIL 30, 2015.</p> <p>The charge to a DR participant is highest of A, B or C:</p> <p>A: Utilization Set-Off (Reliability)</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former <i>OPA</i> DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $= \sum_H \text{PSO}_h \times \text{UR} \times \text{MCMW}_h$ <p>This formula applies when the Reliability Rate for a given Settlement Point is less than 85% during any meter interval of an Activation Hour.</p> <p>Where:</p> <p>For each metered interval, the Reliability Rate at a settlement point is defined as the actual reduction divided by the requested reduction; however, the Reliability Rate cannot exceed 100%.</p> <p>‘PSO’ (Performance Set-Off Factor) refers to a set of factors defined in the <i>OPA</i>’s Program Rules.</p> <p>‘UR’ has the same meaning as in CT1343.</p> <p>‘MCMW’ has the same meaning as in CT1340.</p> <p>‘H’ is the set of all activation hours ‘h’ for the activation period.</p> <p>B: Utilization Set-Off (Timely Confirmation)</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>= $PSO \times UR \times MCMW_h \times CDP$</p> <p>This formula applies when the Participant, regardless of Activation, has failed to deliver, or delivers late, a Confirmation that is required by the IESO pursuant to the DR3 Program Rules.</p> <p>Where:</p> <p>‘CDP’ (Contracted Dispatch Period) means four consecutive hours. Each Contracted Dispatch Period shall occur within the hours of Availability, and shall occur within and no more than once in accordance with the Daily Schedule.</p> <p>‘PSO’ has the same meaning as defined above.</p> <p>‘UR’ has the same meaning as in CT1343.</p> <p>‘MCMW’ has the same meaning as in CT1340</p> <p>C: Utilization Set-Off (Low Confirmation)</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $= \sum_H (\text{PSO} \times \text{UR} \times (\text{MCMW}_h - \text{CMW}))$ <p>This formula applies when the Confirmed MW's are less than 95% of the Monthly Contracted MW for a Confirmed Hour of the Contracted Dispatch Period.</p> <p>Where:</p> <p>'PSO' has the same meaning as defined above.</p> <p>'UR' has the same meaning as in CT1343.</p> <p>'MCMW' has the same meaning as in CT1340.</p> <p>'CMW' has the same meaning as in CT1341.</p> <p>'H' is the set of all confirmed hours 'h' when the Confirmed MW's are less than 95% of the Monthly Contracted MW for the Contracted Dispatch Period.</p> | | | | | | | | | |
| 1345 | On behalf of the former OPA for the DR3 Program – Planned Non- | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1345 ENDED ON APRIL 30, 2015.</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | Performance Event Set-Off Amt | | | <p>The Planned Non-Performance Availability Set-Off applies for any day for which a participant has requested a Non-Performance Event as part of either a Single Day Non-Performance Event or a part of an Extended Period Planned Non-Performance Event.</p> <p>The monthly set-off calculation is the sum of all:</p> <ol style="list-style-type: none"> 1. Non-Activation Day Non-Performance Availability Set-Offs and 2. Activation Day Non-Performance Availability Set-Offs. <p>For 1.) The Non-Activation Day Non-Performance Availability Set-Off amount is:</p> $= (AAR \times MCMW_h \times HANE_H)$ <p>Where: 'AAR' has the same meaning as in CT1340.</p> | | | | | | | | | | April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>‘MCMW’ has the same meaning as in CT1340.</p> <p>‘HANE’ (Hours of Availability for a Non-Performance Event), represents the Hours of Availability for all days in the contract month for which a planned Non-Performance Event is requested and for which an Activation Notice is not received by the participant.</p> <p>For 2.) The Activation Day Non-Performance Availability Set-Off amount is: $= (OH \times AAR \times MCMW_h \times NEWF_H)$ Where: ‘OH’ (Opportunity Hours), means 64 if Option A is applicable to the Settlement Account; or 32 if Option B is applicable to the Settlement Account. ‘AAR’ has the same meaning as in CT1340. ‘MCMW’ has the same meaning as in CT1340.</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | ‘NEWF’ (Non-Performance Event Weighting Factor), means 50%, if the Actual Activated MWh per interval, as averaged over all of the Intervals in the Contracted Dispatch Period for the Activation, is greater than or equal to the product of the Monthly Contracted MW and 1/12 of an hour; or 100% otherwise. | | | | | | | | | |
| 1346 | On behalf of the former OPA for the DR3 Program – Meter Data Set-Off Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1346 ENDED ON APRIL 30, 2015.</p> <p>= MDSF × (HA_H × MCMW_h × AAR)</p> <p>This formula applies when the complete set of weekly meter data and proof of any Forced Outage(s) for a Settlement Account is not received by 15:00 EST on the first Business Day of the following week. The formula recovers a percentage of the availability payment for the applicable week.</p> <p>Where: ‘MDSF’ (Meter Data Set-Off Factor), is an increasing factor for every week</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | <p>that the full data remains undelivered. The factor is equal to:</p> <ul style="list-style-type: none"> - 20% for the first week that the full data remains undelivered; - 33% for the second week that the full data remains undelivered; - 50% for the third week that the full data remains undelivered; <p>and</p> <ul style="list-style-type: none"> - 100% for the fourth week that the full data remains undelivered. <p>‘HA’ has the same meaning as in CT1340. ‘MCMW’ has the same meaning as in CT1340. ‘AAR’ has the same meaning as in CT1340. ‘H’ is the total hours a Participant is available for the applicable week.</p> | | | | | | | | | | |
| 1347 | On behalf of the former OPA for the DR3 Program – Buy-Down Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1347 ENDED ON APRIL 30, 2015.</p> <p>Buy-Down means the act by the Participant of reducing its Monthly</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Contracted MW and/or removing Daily Schedules from participation in DR3.</p> <p>For the Buy-Down of Monthly Contracted MW the payment is: $= (\text{MCMWR} \times \text{BDR} \times \text{HAE})$</p> <p>Where: ‘MCMWR’ (Monthly Contracted MW Reduction), means the MW of demand reduction in the Monthly Contracted MWs. ‘BDR’ (Buy-Down Rate), means the Buy-Down Rate, expressed in \$/MW. ‘HAE’ (Hours of Availability Elapsed), means the number of Hours of Availability that have elapsed in the Schedule Term up to the date that the reduction takes effect.</p> <p>For the Buy-Down of the Daily Schedules the payment is: $= (\text{MCMW} \times \text{RD} \times \text{BDR} \times \text{HAE})$</p> <p>Where:</p> | | | | | | | | | statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>‘MCMW’ has the same meaning as in CT1340.</p> <p>‘RD’ (Requested Days), means the number of Business Days per week from which the Hours of Availability are to be removed.</p> <p>‘BDR’ has the same meaning as defined above.</p> <p>‘HAE’ has the same meaning as defined above.</p> | | | | | | | | | |
| 1348 | On behalf of the former OPA for the DR3 Program – Miscellaneous Settlement Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1348 ENDED ON APRIL 30, 2015.</p> <p>Reserved for DR3 payments or charges of a miscellaneous nature not specifically covered under Charge Types 1340 through 1347.</p> | Monthly | Due DR3-participants Either way | 13 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1350 | Capacity Based Recovery Amount for Class A Loads | CAU ^{m_k} | 9.4.7J.8 | <p>$\sum_{H,M} TD_{C,k,h^m} * PDF_k$</p> <p>Where:</p> <p>(a) ‘H’ is the set of all <i>settlement hours ‘h’</i> in the relevant <i>energy market billing period</i></p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | See comments under charge type 147 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>(b) ‘M’ is the set of all <i>delivery points</i> ‘m’ of <i>market participant</i> ‘k’</p> <p>(c) ‘TD_{C,k,h}’ is total dollar value of all <i>settlement amounts</i> ‘C’ for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ in <i>settlement hour</i> ‘h’ in the relevant <i>energy market billing period</i>, where:</p> <p style="padding-left: 20px;">i. ‘C’ is the set of the <i>settlement amounts</i> applied in accordance with MR Ch. 9 ss. 4.7J.1, 4.7J.2, 4.7J.3, 4.7J.5, 4.7J.6, and 4.7J.7</p> <p>(d) ‘PDF_k’ is the Peak Demand Factor for ‘Class A Market Participant’ or Distributor ‘k’ for the relevant <i>energy market billing period</i>, as determined in accordance with <i>applicable law</i>, where if the ‘Class A Market Participant’ or Distributor ‘k’ ceases to be a ‘Class A</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Market Participant' in respect of the relevant <i>load facility</i> during the relevant <i>energy market billing period</i> , the PDF _k shall be pro-rated accordingly. | | | | | | | | | |
| 1351 | Capacity Based Recovery Amount for Class B Loads | CAU ^m _k | N/A | <p>For Fort Frances Power Corporation Distribution Inc.:</p> $(\sum_{H,M} TD_{C,k,h^m} - TD_{C1350,k,h^m}) \times \text{MAX}((\sum_H^{M,T} AQEW_{k,h}^{m,t} + EG EI_k - EEQ), 0) / \text{Class B Load}$ <p>Where:</p> <p>a) 'TD_{C,k,h^m}' is total dollar value of all <i>settlement amounts</i> 'C' for <i>capacity market participant</i> 'k' at <i>delivery point</i> 'm' in <i>settlement hour</i> 'h' in the relevant <i>energy market billing period</i>, where 'C' is the set of the <i>settlement amounts</i> applied in accordance with MR Ch. 9 ss. 4.7J.1, 4.7J.2, 4.7J.3, 4.7J.5, 4.7J.6, and 4.7J.7.</p> <p>b) 'TD_{C1350,k,h^m}' is total dollar value of <i>settlement amounts</i></p> | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | See comments under charge type 148 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>applied pursuant to section 4.7J.8.1 for <i>capacity market participant ‘k’ at delivery point ‘m’ in settlement hour ‘h’ in the relevant energy market billing period;</i></p> <p>For other Class B Market Participants and Distributors:</p> $\frac{(\sum_{H,M} TD_{C,k,h^m} - TD_{C1350,k,h^m}) \times \text{MAX}((\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - GA_AQEW_{g,k,h,M}^{m,t} - PGS_{h,M}), 0)}{\text{Class B Load}}$ <p>Where:</p> <p>a) ‘TD_{C,k,h^m}’ is total dollar value of all <i>settlement amounts ‘C’ for capacity market participant ‘k’ at delivery point ‘m’ in settlement hour ‘h’ in the relevant energy market billing period</i>, where ‘C’ is the set of the <i>settlement amounts</i> applied in accordance with MR Ch. 9 ss. 4.7J.1, 4.7J.2, 4.7J.3, 4.7J.5, 4.7J.6, and 4.7J.7.</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | b) $TD_{C1350,k,h}^{m}$ is total dollar value of <i>settlement amounts</i> applied pursuant to section 4.7J.8.1 for <i>capacity market participant</i> ‘k’ at <i>delivery point</i> ‘m’ in <i>settlement hour</i> ‘h’ in the relevant ; c) Class B load is calculated as follows: $(\sum_K (\text{MAX}(\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - EEQ - \sum_H^{M,T} GA_AQEW_{g,k,h,M}^{m,t} - \sum_H PGS_{h,M}, 0))) - \sum_K U_k$ Where: i) ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. ii) ‘K’ is the set of all <i>market participants</i> ‘k’. iii) ‘M’ is the set of all <i>delivery points</i> ‘m’ of <i>market participant</i> ‘k’. iv) ‘C’ is the set of the following <i>charge types</i> ‘c’: 1300, 1301, 1302, | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | 1303, 1304, 1305, 1306, 1307 and 1308, 1309, 1310, 1311, 1312 and 1313 and 1314 to 1320, 1321, 1322. | | | | | | | | | |
| 1380 | Demand Response 2 Availability Payment Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1380 ENDED ON FEBRUARY 28, 2015.</p> $\sum_K TD_{k,1330}$ <p>Where ‘K’ is the set of all DR2 participants ‘k’.</p> <p>Where $TD_{k,1330}$ is the <i>settlement amount</i> of <i>charge type</i> 1330 for the month for DR2 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |
| 1381 | Demand Response 2 Availability Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1381 ENDED ON FEBRUARY 28, 2015.</p> $\sum_K TD_{k,1331}$ <p>Where ‘K’ is the set of all DR2 participants ‘k’.</p> <p>Where $TD_{k,1331}$ is the <i>settlement amount</i> of <i>charge type</i> 1331 for the month for DR2 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1382 | Demand Response 2 Utilization Payment Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1382 ENDED ON FEBRUARY 28, 2015.</p> $\sum_K TD_{k,1332}$ <p>Where ‘K’ is the set of all DR2 participants ‘k’.</p> <p>Where $TD_{k,1332}$ is the <i>settlement amount of charge type 1332</i> for the month for DR2 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |
| 1383 | Demand Response 2 Utilization Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1383 ENDED ON FEBRUARY 28, 2015.</p> $\sum_K TD_{k,1333}$ <p>Where ‘K’ is the set of all DR2 participants ‘k’.</p> <p>Where $TD_{k,1333}$ is the <i>settlement amount of charge type 1333</i> for the month for DR2 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |
| 1384 | Demand Response 2 Meter Data Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1384 ENDED ON FEBRUARY 28, 2015.</p> $\sum_K TD_{k,1334}$ | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'K' is the set of all DR2 participants 'k'. Where $TD_{k,1334}$ is the <i>settlement amount of charge type 1334</i> for the month for DR2 participant 'k'. | | | | | | | | | statements and invoice. |
| 1385 | Demand Response 2 Buy-Down Balancing Amount | N/A | N/A | **CALCULATIONS FOR CHARGE TYPE 1385 ENDED ON FEBRUARY 28, 2015. $\sum_K TD_{k,1335}$ Where 'K' is the set of all DR2 participants 'k'. Where $TD_{k,1335}$ is the <i>settlement amount of charge type 1335</i> for the month for DR2 participant 'k'. | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |
| 1386 | Demand Response 2 Miscellaneous Balancing Amount | N/A | N/A | **CALCULATIONS FOR CHARGE TYPE 1386 ENDED ON FEBRUARY 28, 2015. $\sum_K TD_{k,1336}$ Where 'K' is the set of all DR2 participants 'k'. Where $TD_{k,1336}$ is the <i>settlement amount of charge type 1336</i> for the month for DR2 participant 'k'. | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR2 Contract. The DR2 program was last settled on the February 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1390 | Demand Response 3 Availability Payment Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1390 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1340}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1340}$ is the <i>settlement amount of charge type 1340</i> for the month for DR3 participant 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1391 | Demand Response 3 Availability Over-Delivery Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1391 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1341}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1341}$ is the <i>settlement amount of charge type 1341</i> for the month for DR3 participant 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1392 | Demand Response 3 Availability Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1392 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1342}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1342}$ is the <i>settlement amount of charge type 1342</i> for the month for DR3 participant 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1393 | Demand Response 3 Utilization Payment Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1393 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1343}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1343}$ is the <i>settlement amount of charge type 1343</i> for the month for DR3 participant 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1394 | Demand Response 3 Utilization Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1394 ENDED ON APRIL 30, 2015.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | $\sum_K TD_{k,1344}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1344}$ is the <i>settlement amount</i> of <i>charge type</i> 1344 for the month for DR3 participant 'k'.</p> | | | | | | | | | settlement statements and invoice. |
| 1395 | Demand Response 3 Planned Non-Event Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1395 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1345}$ <p>Where 'K' is the set of all DR3 participants 'k'. Where $TD_{k,1345}$ is the <i>settlement amount</i> of <i>charge type</i> 1345 for the month for DR3 participant 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1396 | Demand Response 3 Meter Data Set-Off Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1396 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1346}$ <p>Where 'K' is the set of all DR3 participants 'k'.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where $TD_{k,1346}$ is the <i>settlement amount of charge type 1346</i> for the month for DR3 participant ‘k’. | | | | | | | | | |
| 1397 | Demand Response 3 Buy-Down Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1397 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1347}$ <p>Where ‘K’ is the set of all DR3 participants ‘k’.</p> <p>Where $TD_{k,1347}$ is the <i>settlement amount of charge type 1347</i> for the month for DR3 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1398 | Demand Response 3 Miscellaneous Balancing Amount | N/A | N/A | <p>**CALCULATIONS FOR CHARGE TYPE 1398 ENDED ON APRIL 30, 2015.</p> $\sum_K TD_{k,1348}$ <p>Where ‘K’ is the set of all DR3 participants ‘k’.</p> <p>Where $TD_{k,1348}$ is the <i>settlement amount of charge type 1348</i> for the month for DR3 participant ‘k’.</p> | Monthly | Due OPA | 0 | N/A | N/A | N/A | | | Former OPA DR3 Contract. The DR3 program was last settled on the April 2015 settlement statements and invoice. |
| 1400 | OPA Contract Adjustment | N/A | N/A | Manual entry based on the values submitted by the former OPA via On- | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Implementation details subject to |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Settlement Amount | | | line settlement form “Global Adjustment Amount Information”, subject to Regulation. | | | | | | | | | government regulation |
| 1401 | Incremental Loss Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Hourly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1402 | Hourly Condense System Constraints Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Hourly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1403 | Speed-no-load Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1404 | Condense Unit Start-up and OM&A Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Hourly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1405 | Hourly Condense Energy Costs Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Hourly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1406 | Monthly Condense Energy Costs Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1407 | Condense Transmission Tariff Reimbursement Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1408 | Condense Availability Cost Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1409 | Monthly Condense System Constraints Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1410 | Renewable Energy Standard Offer Program Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via On-line settlement forms: “Licenced Distributor Claims for the Renewable Energy Standard Offer Program” and “Embedded Distributor Claims for the Renewable Energy Standard Offer Program”. | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1411 | Clean Energy Standard Offer Program Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via future On-line settlement form “Clean Energy Standard Offer Program”. | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1412 | Feed-In Tariff Program Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via On-line settlement form “Feed-In Tariff Program”. | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1413 | Renewable Generation Connection – Monthly Compensation Settlement Credit | N/A | N/A | Manual entry based on the values submitted by the OEB. | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | Recipients, compensation amounts and other implementation details subject to OEB regulation. |
| 1414 | Hydroelectric Contract Initiative Settlement Amount | N/A | N/A | Manual entry based on the values submitted by the <i>market participant</i> . | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1415 | Conservation Assessment Recovery | N/A | N/A | $\frac{\sum_{H,M,T} AQEW_{k,h}^{m,t}}{(\sum_{K,H} AQEW_k^{M,T})}$ <p>Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the year 2009. Where ‘K’ is the set of all non-LDC load <i>market participants</i> ‘k’. Where ‘M’ is the set of all <i>delivery points</i> ‘m’ of <i>market participant</i> ‘k’.</p> | Monthly | Due Non-LDC Load | 13 | N/A | N/A | N/A | | | Implementation details subject to government regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where 'TD' equals the value assessed by the <i>OEB</i> . | | | | | | | | | |
| 1416 | Conservation and Demand Management – Compensation Settlement Credit | N/A | N/A | Manual entry based on the values submitted by the <i>OEB</i> and/or as stipulated by contracts held with the <i>IESO</i> . | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1417 | Daily Condense Energy Costs Settlement Credit | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1418 | Biomass Non-Utility Generation Contracts Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via Online <i>IESO</i> . | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1419 | Energy from Waste (EFW) Contracts Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via Online <i>IESO</i> . | Monthly | Due LDCs Either way | 13 | N/A | N/A | N/A | | | |
| 1420 | Ontario Electricity Support Program Settlement Amount | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via Online <i>IESO</i> | Monthly | Due LDCs, USMPs and service providers | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 314/15 |
| 1421 | Capacity Agreement | N/A | N/A | Calculated as per capacity contracts. | Monthly | Either way | 13 | 13 | N/A | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Settlement Credit | | | | | | | | | | | | |
| 1422 | Capacity Agreement Penalty Settlement Amount | N/A | N/A | Calculated as per capacity contracts. | Monthly | Either way | 13 | 13 | N/A | 13 | | | |
| 1423 | Energy Sales Agreement Settlement Credit | N/A | N/A | Calculated as per energy sales contracts. | Monthly | Either way | 13 | 13 | N/A | 13 | | | |
| 1424 | Energy Sales Agreement Penalty Settlement Amount | N/A | N/A | Calculated as per energy sales contracts. | Monthly | Either way | 13 | 13 | N/A | 13 | | | |
| 1425 | Hydroelectric Standard Offer Program Settlement Amount | N/A | N/A | Manual Entry. | Monthly | Due LDCs either way | 13 | N/A | N/A | N/A | | | |
| 1427 | Non-Hydro Renewables Funding Amount | N/A | N/A | Manual entry as per Ontario Transfer Payment Agreement. | Monthly | Due IESO | 13 | N/A | N/A | N/A | January 1, 2021 | March 31, 2022 | Ontario Regulation 735/20 |
| 1450 | OPA Contract Adjustment Balancing Amount | N/A | N/A | TD ₁₄₀₀ | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | Implementation details subject to government regulation |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1451 | Incremental Loss Offset Settlement Amount | N/A | 9.4.2.4 | Calculated as per ancillary service contracts. | Hourly | Due IESO | 13 | N/A | N/A | N/A | | | Reactive Support and Voltage Control Service |
| 1457 | Ontario Electricity Rebate Balancing Amount | N/A | N/A | $\sum KTD_k,9983$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_k,9983$ is the <i>settlement amount</i> of charge type 9983 for the month for <i>market participant</i> 'k'. | Monthly | Due Ministry of Energy | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 363/16 and 364/16 |
| 1460 | Renewable Energy Standard Offer Program Balancing Amount | N/A | N/A | $\sum KTD_{k,1410}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1410}$ is the total <i>settlement amount</i> of charge type 1410 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1461 | Clean Energy Standard Offer Program Balancing Amount | N/A | N/A | $\sum KTD_{k,1411}$ Where 'K' is the set of all <i>market participants</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where $TD_{k,1411}$ is the total <i>settlement amount</i> of <i>charge type</i> 1411 for the month for <i>market participant</i> 'k'. | | | | | | | | | |
| 1462 | Feed-In Tariff Balancing Amount | N/A | N/A | $\sum_K TD_{k,1412}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1412}$ is the total <i>settlement amount</i> of <i>charge type</i> 1412 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1463 | Renewable Generation Connection – Monthly Compensation Settlement Debit | N/A | N/A | $\frac{\sum_K TD_{k,1413} \times (\sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k)}{(\sum_{K,H}^{M,T} AQEW_{k,h}^{m,t} + \sum_K EGEI_k)}$ Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. Where 'K' is the set of all <i>market participants</i> 'k'. Where 'M' is the set of all <i>delivery points</i> 'm' of <i>market participant</i> 'k'. Where $TD_{k,1413}$ is the total <i>settlement amount</i> of <i>charge type</i> 1413 for the month for <i>market participant</i> 'k'. | Monthly | Due MPs | 13 | N/A | N/A | N/A | | | Cost recovery implementation details set out in Ontario Regulation 330/09 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1464 | Hydroelectric Contract Initiative Balancing Amount | N/A | N/A | $\sum_K TD_{k,1414}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1414}$ is the total <i>settlement amount</i> of <i>charge type</i> 1414 for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1465 | Ontario Clean Energy Benefit (-10%) Program Balancing Amount | N/A | N/A | $\sum_K TD_{k,9992}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,9992}$ is the <i>settlement amount</i> of <i>charge type</i> 9992 for the month for <i>market participant</i> 'k'.</p> | Monthly | Due Ministry of Energy | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 495/10. |
| 1466 | Conservation and Demand Management – Compensation Balancing Amount | N/A | | $\sum_K TD_{k,1416}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1416}$ is the <i>settlement amount</i> of <i>charge type</i> 1416 for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1467 | Ontario Rebate for Electricity Consumers (8% Provincial Rebate) | N/A | N/A | $\sum_K TD_{k,9982}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'.</p> | Monthly | Due Ministry of Energy | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 363/16 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | Balancing Amount | | | Where TD _{k,9982} is the <i>settlement amount</i> of <i>charge type</i> 9982 for the month for <i>market participant</i> 'k'. | | | | | | | | | |
| 1468 | Biomass Non-Utility Contracts Balancing Amount | N/A | N/A | $\sum_K TD_{k,1418}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TD _{k,1418} is the total <i>settlement amount</i> of <i>charge type</i> 1418 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1469 | Energy from Waste (EFW) Contracts Balancing Amount | N/A | N/A | $\sum_K TD_{k,1419}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where TD _{k,1419} is the total <i>settlement amount</i> of <i>charge type</i> 1419 for the month for <i>market participant</i> 'k' | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1470 | Ontario Electricity Support Program Balancing Amount | N/A | N/A | <p>** CHARGE TYPE 1470 REPLACED BY CHARGE TYPE 2470 EFFECTIVE FEBRUARY 1, 2018 **</p> $\sum_H^{M,T} (AQEW_{k,h}^{m,t} + EGEL_k) \times TP$ | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 314/15. TP rate subject to OEB regulation. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | | | | | | | | | |
| 1471 | Capacity Agreement Balancing Amount | N/A | N/A | $\sum_K TD_{k,1421}$ Where ‘K’ is the set of all <i>market participants</i> ‘k’. Where $TD_{k,1421}$ is the total <i>settlement amount</i> of <i>charge type</i> 1421 for the month for <i>market participant</i> ‘k’ | Monthly | Either way | 0 | N/A | N/A | N/A | | | |
| 1472 | Capacity Agreement Penalty Balancing Amount | N/A | N/A | $\sum_K TD_{k,1422}$ Where ‘K’ is the set of all <i>market participants</i> ‘k’. Where $TD_{k,1422}$ is the total <i>settlement amount</i> of <i>charge type</i> 1422 for the month for <i>market participant</i> ‘k’ | Monthly | Either way | 0 | N/A | N/A | N/A | | | |
| 1473 | Energy Sales Agreement Balancing Amount | N/A | N/A | $\sum_K TD_{k,1423}$ Where ‘K’ is the set of all <i>market participants</i> ‘k’. Where $TD_{k,1423}$ is the total <i>settlement amount</i> of <i>charge type</i> 1423 for the month for <i>market participant</i> ‘k’ | Monthly | Either way | 0 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| 1474 | Energy Sales Agreement Penalty Balancing Amount | N/A | N/A | $\sum_K TD_{k,1424}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1424}$ is the total <i>settlement amount</i> of <i>charge type</i> 1424 for the month for <i>market participant</i> 'k' | Monthly | Either way | 0 | N/A | N/A | N/A | | | |
| 1475 | Hydroelectric Standard Offer Program Balancing Amount | N/A | N/A | $\sum KTD_{k,1425}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,1425}$ is the total <i>settlement amount</i> of <i>charge type</i> 1425 for the month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | | | |
| 1477 | COVID-19 Energy Assistance Program (CEAP) Settlement Amount | N/A | N/A | Manual entry based on the values submitted via the relevant on-line settlement form "COVID-19 Energy Assistance Program" for residential consumers. | Monthly | Due LDCs and USMPs | 0 | N/A | N/A | N/A | | | Implementation details subject to OEB order EB-2020-0186 and EB-2020-0163 |
| 1487 | Non-Hydro Renewables Funding Balancing Amount | N/A | N/A | TD_{1427} | Monthly | Due IESO | 13 | N/A | N/A | N/A | January 1, 2021 | March 31, 2022 | Ontario Regulation 735/20 |
| 1500 | Day-Ahead Production Cost Guarantee | DA_PCG_COMPI | 9.4.7D.4 | \sum^T (Component 1 – Component1 Clawback) | Hourly | Either Way | 13 | N/A | N/A | N/A | | | Component 1 applies to |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | Payment – Component 1 and Component 1 Clawback | | | <p>Component 1: $-1 \times OP(EMP_h^{m,t}, \text{MIN}(DA_DQSI_{k,h}^{m,t}, DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), DA_BE) + DA_SNLC_{k,h}^m/12$</p> <p>Component 1 Clawback: $-1 \times OP(EMP_h^{m,t}, \text{MIN}(MLP_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), DA_BE) + DA_SNLC_{k,h}^m/12$</p> <p>Where: T is the set of metering intervals in the settlement hour h. ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2.</p> <p>For a combustion turbine resource associated to a pseudo unit:</p> <p>Component 1: $-1 \times OP(EMP_h^{m,t}, \text{MIN}(DA_DQSI_{k,h}^{m,t}, DQSI_{k,h}^{m,t},$</p> | | | | | | | | | | <p>Variants 1, 2 and 3.</p> <p>Component 1 Clawback applies to Variant 2 only.</p> <p>For a description of Production Cost Guarantee Variants, see Market Rules 9.4.7D.2.1</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $AQEI_{k,h}^{m,t}, DIPC_{k,h}^{m,t} + (DA_SNLC_{k,h}^{m/12}) * (1 - PST_{k,h}^{p,t})$ Component 1 Clawback: $-1 \times OP(EMP_h^{m,t}, MIN(MLP_CONS_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), DIPC_{k,h}^{m,t} + (DA_SNLC_{k,h}^{m/12}) * (1 - PST_{k,h}^{p,t}))$ For a steam turbine resource associated to a pseudo unit: Component 1: $-1 \times OP(EMP_h^{m,t}, MIN(DIGQ_{k,h}^{m,t}, DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), DIPC_{k,h}^{m,t} + (DA_SNLC_{k,h}^{m/12}) * PST_{k,h}^{p,t})$ Component 1 Clawback: $-1 \times OP(EMP_h^{m,t}, MIN(MLP_CONS_{k,h}^{m,t}, AQEI_{k,h}^{m,t}), DIPC_{k,h}^{m,t} + (DA_SNLC_{k,h}^{m/12}) * PST_{k,h}^{p,t})$ | | | | | | | | | | |
| 1501 | Day-Ahead Production Cost Guarantee | DA_PCG_COMP2 | 9.4.7D.4 | $\sum^T (XDA_BE_{k,h}^{m,t} - MAX(0, XBE_{k,h}^{m,t}))$ Where: | Hourly | Either Way | 13 | N/A | N/A | N/A | | | Component 2 applies to Variants 1, 2 and 3. | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | Payment – Component 2 | | | <p>T is the set of metering intervals in the settlement hour h.</p> $XDA_BE_{k,h}^{m,t} = (-1) * [OP(EMP_h^{m,t}, \min(DA_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}), DA_BE) - OP(EMP_h^{m,t}, \min(DA_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})), DA_BE)]$ $XBE_{k,h}^{m,t} = (-1) * [OP(EMP_h^{m,t}, \min(DA_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}), BE) - OP(EMP_h^{m,t}, \min(DA_DQSI_{k,h}^{m,t}, OPCAP_{k,h}^{m,t}, \max(DQSI_{k,h}^{m,t}, AQEI_{k,h}^{m,t})), BE)]$ <p>Where: ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2.</p> <p>$EMP_h^{m,t} = 0$.</p> <p>For a combustion turbine and a steam turbine resources associated to a pseudo unit: DA_BE is replaced with $DIPC_{k,h}^{m,t}$.</p> | | | | | | | | | | For a description of Production Cost Guarantee Variants, see Market Rules 9.4.7D.2.1 |

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| | | | | For a steam turbine resource associated to a pseudo unit: DA_DQSI _{k,h} ^{m,t} is replaced with the DIGQ _{k,h} ^{m,t} | | | | | | | | | |
| 1502 | Day-Ahead Production Cost Guarantee Payment – Component 3 and Component 3 Clawback | DA_PCG_COMP3 | 9.4.7D.4 | $\sum^T (-1) *$ (Component 3 + Component 3 Clawback) Where: T is the set of metering intervals in the settlement hour h. For Component 3, the six scenarios of the possible orderings of the generator’s DA_DQSI, DQSI and MQSI are as follows: 1. DQSI >= MQSI >= DA_DQSI 2. MQSI >= DQSI >= DA_DQSI 3. DQSI > DA_DQSI > MQSI 4. MQSI > DA_DQSI > DQSI 5. DA_DQSI >= DQSI > MQSI 6. DA_DQSI >= MQSI > DQSI | Hourly | Either Way | 13 | N/A | N/A | N/A | | | <p>Component 3 applies to Variants 1, 2 and 3.</p> <p>Component 3 Clawback applies to Variant 2 only.</p> <p>For a description of Production Cost Guarantee Variants, see Market Rules 9.4.7D.2.1</p> |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Component 3:</p> <p>Component 3 is calculated when:</p> <p>the CMSC for energy ($TD_{k,h,105}^{m,t}$) for the same metering interval is a value other than zero; and</p> <p>the mathematical sign of (DQSI-MQSI) is equal to the mathematical sign of (AQEI-MQSI).</p> <p>Scenario 1 and 2: 0</p> <p>Scenario 3: $OP(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE) - \text{MAX}(OP(EMP_h^{m,t}, DA_DQSI_{k,h}^{m,t}, BE), OP(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE))$</p> <p>Scenario 4: $OP(EMP_h^{m,t}, DA_DQSI_{k,h}^{m,t}, BE) - \text{MAX}(OP(EMP_h^{m,t}, DQSI_{k,h}^{m,t}, BE), OP(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE))$</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>Scenario 5 and 6: $TD_{k,h,105}^{m,t}$</p> <p>Refer to Market Rules for a description of Scenarios 1 through 6.</p> <p>Component 3 Clawback:</p> <p>Component 3 Clawback is calculated when: the event is a constrained-on event (i.e. Scenarios 3 and 5); the <i>minimum loading point</i> is greater than the real-time unconstrained schedule; and</p> <p>Component 3 ($PCG_COMP3_{k,h}^{m,t}$) for the same interval is a value other than zero.</p> <p>$MAX(OP(EMP_h^{m,t}, MLP_{k,h}^{m,t}, BE), OP(EMP_h^{m,t}, AQEI_{k,h}^{m,t}, BE)) - OP(EMP_h^{m,t}, MQSI_{k,h}^{m,t}, BE)$</p> <p>For combustion turbine resources associated to a pseudo unit:</p> | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
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| | | | | <p>DA_BE is replaced with $DIPC_{k,h}^{m,t}$; and MLP is replaced with MLP_CONS.</p> <p>For steam turbine resources associated to a pseudo unit: DA_BE is replaced with $DIPC_{k,h}^{m,t}$, MLP is replaced with MLP_CONS, and DA_DQSI$_{k,h}^{m,t}$ is replaced with the DIGQ$_{k,h}^{m,t}$.</p> <p>Where 'OP' is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2.</p> | | | | | | | | | |
| 1503 | Day-Ahead Production Cost Guarantee Payment – Component 4 | DA_PCG_COMP4 | 9.4.7D.4 | $\sum^T ((-1) \times [OP \left(\begin{matrix} PROR_{r1,h}^{m,t}, \\ 3OR_SQROR_{r1,k,h}^{m,t}, \\ \dots \end{matrix} \right)])$ | Hourly | Either Way | 13 | N/A | N/A | N/A | | | <p>Component 4 applies to Variants 1, 2 and 3.</p> <p>For a description of Production Cost Guarantee Variants, see Market Rules 9.4.7D.2.1</p> |

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| | | | | $+ OP \left(\begin{matrix} PROR_{r2,h}^{m,t}, \\ 10NS_SQROR_{r2,k,h}^{m,t}, \\ BR_{r2,k,h}^{m,t} \end{matrix} \right)$ $+ OP \left(\begin{matrix} PROR_{r3,h}^{m,t}, \\ 10S_SQROR_{r3,K,h}^{m,t}, \\ BR_{r3,k,h}^{m,t} \end{matrix} \right)]]$ <p>Where T is the set of metering intervals in the settlement hour h. ‘OP’ is the operating profit function defined in <i>IESO market rules</i> Section 9.3.8B.2. r1 = 30-minute operating reserve r2 = 10-minute non-spinning operating reserve r3 = 10-minute spinning operating reserve</p> $30R_SQROR_{r1,k,h}^{m,t} = \text{MAX}[0, \text{MIN}(\text{DA_DQSI}_{k,h}^{m,t} - \text{MQSI}_{k,h}^{m,t}, \text{SQROR}_{r1,k,h}^{m,t})]$ | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $10NS_SQROR_{r2,k,h}^{m,t} = \text{MAX}[0, \text{MIN}(\text{DA_DQSI}_{k,h}^{m,t} - \text{MQSI}_{k,h}^{m,t} - 30R_SQROR_{r1,k,h}^{m,t}, \text{SQROR}_{r2,k,h}^{m,t})]$ $10S_SQROR_{r3,k,h}^{m,t} = \text{MAX}[0, \text{MIN}(\text{DA_DQSI}_{k,h}^{m,t} - \text{MQSI}_{k,h}^{m,t} - 30R_SQROR_{r1,k,h}^{m,t} - 10NS_SQROR_{r2,k,h}^{m,t}, \text{SQROR}_{r3,k,h}^{m,t})]$ <p>For combustion turbine resources and steam turbine resources associated to a pseudo unit: DA_DQSI_{k,h}^{m,t} is replaced with the DIGQ_{k,h}^{m,t}</p> | | | | | | | | | | |
| 1504 | Day-Ahead Production Cost Guarantee Payment – Component 5 | DA_PCG_COMP5 | 9.4.7D.4 | <p>If first hour of the DACP start event is not HE24, then the start-up cost is calculated as follows:</p> <p>Scenario 1 (achieves MLP before the 7th interval): DA_SUC_{k,h}^m</p> <p>Scenario 2 (achieves MLP between the 7th and 18th interval):</p> | Hourly | Due IESO | 13 | N/A | N/A | N/A | | | <p>Component 5 applies to Variant 1 only.</p> <p>For a description of Production Cost Guarantee Variants, see Market Rules 9.4.7D.2.1</p> | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
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| | | | | $DA_SUC_{k,h}^m - (DA_SUC_{k,h}^m \times 1/12 \times SUC_INT)$ <p>Where</p> <p>SUC_INT is the number of 5-minute intervals between and including Interval 7 and 18 the <i>market participant</i> takes to achieve MLP</p> <p>Scenario 3 (achieves MLP after the start of the 18th interval):</p> <p>0</p> <p>For a combustion turbine resource associated to a pseudo unit:</p> <p>Scenario 1 (achieves MLP before the 7th interval):</p> $DA_SUC_{k,h}^p * (1 - PST_{k,h}^{p,t})$ <p>Scenario 2 (achieves MLP between the 7th and 18th interval):</p> $DA_SUC_{k,h}^p * MLP_MF * (1 - PST_{k,h}^{p,t})$ | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments | |
|--------------------|------------------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|----------|--|
| | | | | <p>Scenario 3 (achieves MLP after the start of the 18th interval): 0</p> <p>Where $MLP_MF = 1/12 * (12 - SUC_INT)$</p> <p>For a steam turbine resource associated to a pseudo unit:</p> <p>Scenario 1 (achieves MLP before the 7th interval): $DA_SUC_{k,h}^p * (PST_{k,h}^{p,t})$</p> <p>Scenario 2 (achieves MLP between the 7th and 18th interval): $DA_SUC_{k,h}^p * MLP_MF * (PST_{k,h}^{p,t})$</p> <p>Scenario 3 (achieves MLP after the start of the 18th interval): 0.</p> <p>If first hour of the DACP start event is HE24 and the resource has not achieved MLP before Interval 12,</p> | | | | | | | | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|----------------------------------------------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|----------|
| | | | | <p>then the start-up cost is calculated as follows:</p> $DA_SUC_{k,h}^m * 50\%$ <p>For a combustion turbine resource associated to a pseudo unit:</p> $DA_SUC_{k,h}^m * (1 - PST_{k,h}^{p,t}) * 50\%$ <p>For a steam turbine resource associated to a pseudo unit:</p> $DA_SUC_{k,h}^m * (PST_{k,h}^{p,t}) * 50\%$ | | | | | | | | | |
| 1505 | Day-Ahead Production Cost Guarantee Reversal | | 9.4.7D.6 | <p>For each DACP start event</p> $\text{If } \sum_{H,C} TD_{k,h,c} < 0$ <p>Then $\sum_{H,C} TD_{k,h,c}$</p> <p>Else 0</p> <p>Where: 'C' is the set of the following charge types 'c' as follows: 1500, 1501, 1502, 1503, 1504</p> | Hourly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|---------------------------------------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|----------|
| | | | | ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the DACP start event. | | | | | | | | | |
| 1510 | Day-Ahead Generator Withdrawal Charge | DA_GWC | 9.3.8F.2 | <p>The Day-Ahead Generator Withdrawal Charge is calculated as follows:</p> <p>If notification of the withdrawal is received 4 or more hours prior to first withdrawal hour:</p> $\text{MIN}(0, \sum_{i=1}^n (-1)^i * \text{OP}(\text{MIN}(\text{PD_EMP}_h^{m,t}, \text{EMP}_h^{m,t}), \text{MLP}_{k,h}^{m,t}, \text{DA_BE}_{k,h}^{m,t}))$ <p>Where:</p> <p>n is the set of all <i>metering intervals</i> ‘t’ in <i>settlement hour</i> ‘h’ for the total number of hours with a committed day-ahead schedule for the DACP start event that are withdrawn</p> <p>If notification of the withdrawal is received less than 4 hours prior to first withdrawal hour:</p> $\text{MIN}(0, \sum_{i=1}^n (-1)^i * \text{OP}(\text{EMP}_h^{m,t}, \text{MLP}_{k,h}^{m,t}, \text{DA_BE}_{k,h}^{m,t}))$ | Daily | Due IESO | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|----------------------------------------------------|---------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|----------|
| | | | | <p>Where: n is the set of all <i>metering intervals</i> 't' in <i>settlement hour</i> 'h' for the total number of hours with a committed day-ahead schedule for the DACP start event that are withdrawn</p> <p>For resources associated to a pseudo unit, the DA_BE is replaced with $DIPC_{k,h}^{m,t}$; and the MLP is replaced with MLP_CONS.</p> | | | | | | | | | |
| 1550 | Day-Ahead Production Cost Guarantee Recovery Debit | | 9.4.8.1.12 | $\sum_{H,c}^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where: 'C' is the set of the following charge types 'c' as follows: 1500, 1501, 1502, 1503, 1504, 1505 'K' is the set of all market participants 'k'. 'M' is the set of all delivery points 'm' and intertie metering points 'i'.</p> | Daily | Due IESO | 13 | N/A | 0 | 13 | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|---------------------------------------|---------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|----------|
| | | | | <p>'H' is the set of all <i>settlement hours</i> 'h' in the day.</p> <p>'T' is the set of 12 <i>metering intervals</i> 't' during <i>settlement hour</i> 'h'.</p> | | | | | | | | | |
| 1560 | Day-Ahead Generator Withdrawal Rebate | | 9.4.8.2.14 | $\sum_{H,c}^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_K^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where: 'c' is <i>charge type</i> 1510. 'K' is the set of all market participants 'k'. 'M' is the set of all delivery points 'm' and intertie metering points 'i'. 'H' is the set of all <i>settlement hours</i> 'h' in the day. 'T' is the set of 12 <i>metering intervals</i> 't' during <i>settlement hour</i> 'h'.</p> | Daily | Due MP | 13 | N/A | 0 | 13 | | | |
| 1600 | Forecasting Service Settlement Amount | N/A | 9.1.1.2.16, 9.4.7G, 9.4.7G.1, 9.4.8.1.16, 9.6.3.17, 9.6.11.5 | Manual entry based on the values submitted by the forecasting entity. | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|----------------------------------------------|---------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|-------------------------------------------------------------------|
| 1650 | Forecasting Service Balancing Amount | N/A | 9.1.1.2.16, 9.4.7G, 9.4.7G.1, 9.4.8.1.16, 9.6.3.17, 9.6.11.5 | $= \sum_{H,C}^{M,T} TD_{h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{k,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ <p>Where ‘C’ is charge type ‘c’ 1600. Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’.</p> | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | |
| 1750 | Dispute Resolution Balancing Amount (Market) | N/A | 3.2.7 and 9.6.8.5 (if applicable) | $\sum_{H,cM,T} TD_{h,c} (700) \times [(AQEW_{k,hm,t} + SQEW_{k,hi,t}) / \sum_{k,HM,T} (AQEW_{k,hm,t} + SQEW_{k,hi,t})]$, where applicable Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | Monthly | Due MP | 13 | N/A | 0 | 13 | | | |
| 1753 | MOE - Rural and Remote Settlement Debit | N/A | N/A | <p>Manual entry based on:</p> <p>(1) the values submitted via on-line settlement form “Rural or Remote Rate Protection (RRRP) – Fixed Rate Credit”;</p> | Monthly | Due Ministry of Energy | N/A | N/A | N/A | N/A | | | Implementation details subject to government and OEB regulations. |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|----------------------------------------------------------------------|---------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|-------------------------------------------------------------------|
| 2148 | Class B Global Adjustment Prior Period Correction Settlement Amount | N/A | N/A | Manual entry based on post-final changes to input data for charge type 148 | Monthly | Due MP | 13 | N/A | N/A | N/A | | | |
| 2470 | MOE - Ontario Electricity Support Program Balancing Amount | N/A | N/A | <p>$\Sigma KTDk, 1420$</p> <p>Where 'K' is the set of all <i>market participants</i> 'k'.</p> <p>Where TDk,1420 is the <i>settlement amount of charge type 1420</i> for the month for <i>market participant</i> 'k'.</p> | Monthly | Due Ministry of Energy | 0 | N/A | N/A | N/A | | | Implementation details subject to government and OEB regulations. |
| 6000 | Ontario Fair Hydro Plan - Regulatory Asset Transfer Amount | N/A | N/A | Manual Entry | Monthly | Due Financing Entity | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |
| 6050 | Ontario Fair Hydro Plan - Regulatory Asset Transfer Balancing Amount | N/A | N/A | Manual Entry | Monthly | Due IESO | N/A | N/A | N/A | N/A | | | Implementation details subject to government regulations |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|----------------------------------------------------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|---------------------------|
| 6147 | Class A Global Adjustment Deferral Recovery Amount | N/A | N/A | $MDCAA \times (PDF_{k,m,d} / \sum_K PDF_{k,m,d})$ Where 'K' is the set of all <i>market participants</i> 'k'. | Monthly | Due IESO | 13 | N/A | N/A | N/A | January 1, 2021 | December 31, 2021 | Ontario Regulation 429/04 |
| 6148 | Class B Global Adjustment Deferral Recovery Amount | N/A | N/A | $CBRR \times CBMP_k$ Where: $CBRR = MDCBA / (\text{Class B Load} - \sum_K RPPVA_k)$ $\text{Class B Load} = (\sum_{K,H}^{M,T} AQEW_{k,h}^{m,t} + \sum_K EGEL_k - \sum_K EEQ - \sum_K GA_AQEW_{g,k,h,M}^{m,t} - \sum_K PGS_{h,M} - \sum_K U_k)$ For Fort Frances Power Corporation Distribution Inc.: $CBMP_k = \sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEL_k - EEQ - RPPVA_k$ | Monthly | Due IESO | 13 | N/A | N/A | N/A | January 1, 2021 | December 31, 2021 | Ontario Regulation 429/04 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|------------------------------------------------------|---------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|---------------------------|
| | | | | <p>For other applicable Class B market participants or licensed distributors that are also market participants :</p> $CBMP_k = \sum_H^{M,T} AQEW_{k,h}^{m,t} + EGEI_k - GA_AQEW_{g,k,h,M}^{m,t} - PGS_{h,M} - RPPVA_k$ <p>Where 'H' is the set of all <i>settlement hours</i> 'h' in the month. Where 'K' is the set of all <i>market participants</i> 'k'. Where 'M' is the set of all <i>delivery points</i> 'm' of <i>market participant</i> 'k'.</p> | | | | | | | | | |
| 9147 | Class A Global Adjustment Smoothing Balancing Amount | N/A | N/A | $\sum_K TD_{k,6147}$ <p>Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,6147}$ is the <i>settlement amount</i> of <i>charge type 6147</i> for the month for <i>market participant</i> 'k'.</p> | Monthly | Due IESO | 0 | N/A | N/A | N/A | April 1, 2020 | December 31, 2021 | Ontario Regulation 429/04 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|------------------------------------------------------|---------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 9148 | Class B Global Adjustment Smoothing Balancing Amount | N/A | N/A | $\sum_K TD_{k,6148}$ Where 'K' is the set of all <i>market participants</i> 'k'. Where $TD_{k,6148}$ is the <i>settlement amount of charge type 6148</i> for the current month for <i>market participant</i> 'k'. | Monthly | Due IESO | 0 | N/A | N/A | N/A | April 1, 2020 | December 31, 2021 | Ontario Regulation 429/04 |
| 9920 | Adjustment Account Credit | AAC | 9.6.18.6 | $AAD \times \sum_H^{M,T} [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t}) / \sum_{K,H}^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$ Where 'H' is the set of all <i>settlement hours</i> 'h' in the <i>billing periods</i> immediately preceding the current <i>billing period</i> , as determined by <i>IESO Board</i> . Where 'T' is the set of all <i>metering intervals</i> 't' in the set of all <i>settlement hours</i> 'H'. Where 'M' is the set of all <i>delivery points</i> 'm' and <i>intertie metering points</i> 'i' | Monthly (when applicable) | Due MP | 13 | N/A | 0 | 13 | | | The <i>billing period</i> is defined in Market Manual 5: Settlements Part 5.5: Physical Markets Settlement Statements, section 1.6.30 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|-----------------------------------------------------------------------------------|---------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|-------------------------------------------------------------------------|
| | | | | Where 'K' is the set of all <i>market participants</i> 'k'. | | | | | | | | | |
| 9980 | Smart Metering Charge | N/A | N/A | Manual entry based on the values submitted by the <i>Smart Metering Entity</i> . | Monthly | Due <i>IESO</i> | 13 | N/A | N/A | N/A | | | Subject to Ontario Regulation 453/06 and the applicable OEB rate order. |
| 9982 | Ontario Rebate for Electricity Consumers (8% Provincial Rebate) Settlement Amount | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement form "Ontario Rebate for Electricity Consumers (OREC) – LDC and USMP"; and (2) 8 per cent of the base invoice amount for <i>market participant consumers</i> who have an eligible account with the <i>IESO</i> | Monthly | Due LDCs, Unit Sub-Meter Providers and eligible MPs | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 363/16 |
| 9983 | Ontario Electricity Rebate Settlement Amount | N/A | N/A | Manual entry based on: (1) the values submitted via on-line settlement forms "Ontario Electricity Rebate (OER) – LDC & USMP"; | Monthly | Due LDCs, Unit Sub-Meter Providers and eligible MPs | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario Regulation 363/16 and 364/16 |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|------------------------------------------------------------|---------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|---------------------------------------------------------------------------|
| | | | | and (2) 33.2 per cent of the base invoice amount for <i>market participant consumers</i> who have an eligible account with the <i>IESO</i> | | | | | | | | | |
| 9984 | COVID-19 Energy Assistance Program (CEAP) Balancing Amount | N/A | N/A | $\Sigma KTDk,1477$ Where ‘K’ is the set of all market participants ‘k’ Where TDk,1477 is the settlement amount of charge type 1477 for the month for market participant ‘k’. | Monthly | Due Ministry of Energy | 0 | N/A | N/A | N/A | | | Implementation details subject to OEB order EB-2020-0186 and EB-2020-0163 |
| 9990 | IESO Administration Charge | N/A | 9.4.5.1 | $\sum_H^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + EGEl_k) \times TP$ Where ‘H’ is the set of all <i>settlement hours</i> ‘h’ in the month. Where ‘T’ is the set of all <i>metering intervals</i> ‘t’ in the set of all <i>settlement hours</i> ‘H’. | Monthly | Due IESO | 13 | N/A | 0 | 13 | | | TP rate subject to OEB regulation. |
| 9992 | Ontario Clean Energy Benefit (-10%) Program | N/A | N/A | Manual entry based on the values submitted by <i>market participants</i> via on-line settlement forms “Ontario | Monthly | Due LDCs and Unit Sub-Meter | 0 | N/A | N/A | N/A | | | Implementation details subject to Ontario |

| Charge Type Number | Charge Type Name | Settlement Amount Acronym | Market Rules Reference | Equation | Settlement Resolution | Cashflow (See Note at Beginning of this Section) | HST Tax Treatment within Ontario (%) | HST Tax Treatment for U.S., Manitoba, and Quebec Generation (%) | HST Tax Treatment for U.S. Load (%) | HST Tax Treatment for Manitoba and Quebec Load (%) | Effective Start Trading Day | Effective End Trading Day | Comments |
|--------------------|-------------------|---------------------------|------------------------|---------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|-----------------------------|---------------------------|--------------------|
| | Settlement Amount | | | Clean Energy Benefit (-10%) – LDC” and “Ontario Clean Energy Benefit (-10%) – Unit Sub-Meter Provider”. | | Providers Either way | | | | | | | Regulation 495/10. |
| 9996 | Recovery of Costs | N/A | Ch. 2, Appendix 3.4 | Manual entry as per Chapter 2, Appendix 3.4 | Monthly | Due IESO | 13 | N/A | N/A | N/A | | | |

2.3 Rounding Conventions – by Settlement Variable

2.3.1 Key to the Table of Rounding Conventions for Individual Settlement Variables

| Column Name | Description |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variable referenced in Section 2.1 | This column provides the name of the variable listed in Section 2.1. |
| Data Description | The short name of the variable in question. |
| Number of decimal places (values published by upstream systems) | If this variable is available to <i>market participants</i> via another system besides <i>settlements</i> , this number of significant digits to the right of the decimal place in the published value. NOTE: “published” does not necessarily mean a public report or a report available to all <i>market participants</i> . E.g. <i>metering data</i> from the <i>metering database</i> . |
| Number of significant digits to the right of the decimal (values received by CRS) | This column discloses the accuracy of a settlement variable received by the <i>IESO</i> settlements system via an upstream system OR manually entered as the case may be. |
| Number of significant digits to the right of the decimal (externally passed from CRS in settlement statements or data files) | This column discloses the accuracy of a settlement variable appearing on a <i>settlement statement</i> . NOTE: This should NOT be confused with the number of decimal places allowable in some columns on the <i>settlement statements</i> and data files as set out in, “Format Specification for Settlement Statements and Data Files.” |
| Comments | Any comments as to the availability of such variables. In some cases, variables are not made available to <i>market participants</i> via upstream systems and are noted as such. In other instances variables are not published in a report but are communicated in participant-specific messages (e.g. <i>bid/offer</i> confirmation). |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|-----------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AAD | Adjustment Account Disbursement | N/A | 2 | 3 | <ul style="list-style-type: none"> Not published in upstream IESO systems |
| $AQEI_{k,h}^{m,t}$ | Allocated Quantity of Energy Injected | 2 | 3 | 3 | <ul style="list-style-type: none"> RMS presentation is in units of KW to TWO decimal places. Unit change to MW to 3 decimal places occurs prior to transfer to CRS. |
| $AQEW_{k,h}^{m,t}$ | Allocated Quantity of Energy Withdrawn | 2 | 3 | 3 | <ul style="list-style-type: none"> RMS presentation is in units of KW to TWO decimal places. Unit change to MW to 3 decimal places occurs prior to transfer to CRS. |
| $AQOR_{r,k,h}^{m,t}$ | Allocated Quantity of Operating Reserve | 1 | 1 | 1 | <ul style="list-style-type: none"> See SQROR. |
| BE | Energy Offers | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream IESO systems. Confirmations passed to <i>market participants as bids/offers</i> (“dispatch data”) are received. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|-------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BL | Energy Bids | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream IESO systems. Confirmations passed to <i>market participants as bids/offers</i> (“dispatch data”) are received. |
| BR _r | Operating Reserve Offers | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream IESO systems. Confirmations passed to <i>market participants as bids/offers</i> (“dispatch data”) are received. |
| BCQ _{s,k,h} ^{m,t} | Physical Bilateral Contract Quantity of Energy bought | N/A | 1 or 3 | 1 or 3 | <ul style="list-style-type: none"> Not published via upstream IESO systems. <i>Physical Bilateral Contract Data</i> is provided to the IESO by the selling market participant. Accuracy driven by the submission at the MIM interface and the method used (i.e. absolute quantities vs. 100% of PBC). |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $BCQ_{k,b,h}^{m,t}$ | Physical Bilateral Contract Quantity of Energy sold | N/A | 1 or 3 | 1 or 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. <i>Physical Bilateral Contract Data</i> is provided to the <i>IESO</i> by the <i>selling market participant</i>. Accuracy driven by the submission at the MIM interface and the method used (i.e. absolute quantities vs. 100% of <i>PBC</i>). |
| CACP ^z | Capacity Auction Clearing Price | 2 | 2 | 2 | <ul style="list-style-type: none"> Published in post-auction report. |
| CACP ^z _h | Hourly Capacity Auction Clearing Price | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| CAEO ^m _{h,k} | Capacity Auction Energy Offer | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> system |
| CARC ^m _k | Capacity Auction Registered Capability | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> system |
| CBOC ^m _k | Buy-Out Capacity | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| CCO ^m _{k,h} | Capacity Obligation (MW) | 1 | 3 | 3 | <ul style="list-style-type: none"> Published in private post-auction report. |
| CGC | Combined Guaranteed Costs | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|-------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CICAP ^m _k | Capacity Auction <i>Cleared ICAP</i> | | | | <ul style="list-style-type: none"> • |
| CNPFT _m | Capacity Auction Non-Performance Factor | N/A | 1 | 1 | <ul style="list-style-type: none"> • Not published via upstream <i>IESO</i> systems. |
| DA_BE _{k,h} ^{i,t} | <i>Energy Offer</i> submitted into the <i>schedule of record</i> | N/A | N/A | N/A | <ul style="list-style-type: none"> • Not published via upstream <i>IESO</i> systems. • Confirmations passed to <i>market participants</i> as <i>bids/offers</i> (“<i>dispatch data</i>”) are received. |
| DA_BE _{k,h} ^{m,t} | <i>Energy Offer</i> submitted into the <i>schedule of record at a delivery point</i> | N/A | N/A | N/A | <ul style="list-style-type: none"> • Not published via upstream <i>IESO</i> systems. • Confirmations passed to <i>market participants</i> as <i>bids/offers</i> (“<i>dispatch data</i>”) are received. |
| DA_BL _{k,h} ^{i,t} | <i>Energy Bids</i> submitted into the <i>schedule of record</i> | N/A | N/A | N/A | <ul style="list-style-type: none"> • Not published via upstream <i>IESO</i> systems. • Confirmations passed to <i>market participants</i> as <i>bids/offers</i> (“<i>dispatch data</i>”) are received. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DA_DQSI _{k,h} ^{i,t} | <i>Schedule of record</i> dispatch quantity scheduled for injection at an <i>intertie metering point</i> | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_DQSI _{k,h} ^{m,t} | <i>Schedule of record</i> dispatch quantity scheduled for injection at a <i>delivery point</i> | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_DQSW _{k,h} ^{i,t} | <i>Schedule of record</i> dispatch quantity scheduled for withdrawal at an <i>intertie metering point</i> | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_ELMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the export zone | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| DA_ILMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the import zone | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|-------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DA_SNLC _{k,h} ^m | Speed-no-load costs submitted into the <i>schedule of record</i> | 1 | 2 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_SNLC _{k,h} ^p | Speed-no-load costs for pseudo units submitted into the <i>schedule of record</i> | 1 | 2 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_SUC _{k,h} ^m | Start-up costs submitted into the <i>schedule of record</i> | 1 | 2 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DA_SUC _{k,h} ^p | Start-up costs for pseudo units submitted into the <i>schedule of record</i> | 1 | 2 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DIPC _{k,h} ^{m,t} | Derived Interval Price Curve | 1 | 2 | 1 | <ul style="list-style-type: none"> Derived price curve and therefore not published on <i>settlement statements</i>. |
| DIGQ _{k,h} ^{m,t} | Derived Interval Guaranteed Quantity | 1 | 1 | 1 | <ul style="list-style-type: none"> Derived schedule quantity and therefore not published on <i>settlement statements</i>. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|--------------------------------------|------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DQSI _{k,h} ^{m,t} | Dispatch Quantity of Energy Scheduled for Injection | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DQSR _{r,k,h} ^{m,t} | Dispatch Quantity Schedule of Operating Reserve | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DQSW _{k,h} ^{m,t} | Dispatch Quantity of Energy Scheduled for Withdrawal | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| DRACP | Demand Response Auction Clearing Price | 2 | 2 | 2 | <ul style="list-style-type: none"> Published in post-auction report. |
| DRACP _h | Hourly Demand Response Auction Clearing Price | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| DRBOC _k | Demand Response Buy-Out Capacity | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| DRCO _k | Demand Response Capacity Obligation (MW) | 1 | 3 | 3 | <ul style="list-style-type: none"> Published in private post-auction report. |
| DREBQ ^m _{k,h} | Demand Response Energy Bid Quantity | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| DRNPF | Demand Response Non-Performance Factor | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| DRSQTY ^m _{k,h} | Demand Response Scheduled Quantity | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| EEQ | Excluded Energy Quantity | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $EGEI_k$ | Embedded Generator Energy Injection | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| $EIM_{k,h}$ | Operating Profit Function for the IMPORT of Energy under the Intertie Offer/Bid Guarantee Settlement Credit | N/A See Section 2.4 | N/A See Section 2.4 | N/A See Section 2.4 | <ul style="list-style-type: none"> This acronym is associated with the energy import component of the Intertie Offer/Bid Guarantee Settlement Credit. |
| $EMP_h^{i,t}$ | 5-minute Energy Market Price at the Interties | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| $EMP_h^{m,t}$ | 5-minute Energy Market Price within Ontario | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| $EMP_h^{REF,t}$ | 5-minute Energy Market Reference Price | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| ETS | Export Transmission Service Tariff Rate | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Subject to the OEB “Ontario Transmission Rate Order”. |
| FP_h^m | Fixed Energy Rate | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| FPC_h^m | Rate for a designated group of <i>charge types</i> (see description of <i>charge type</i> 141)) | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|--------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRP | Generator Regulated Price | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| $HDRBP_{k,h}^m$ | HDR bid price | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| $HDRDC_{k,h}^m$ | Measured hourly demand response capacity | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| HDRTAPR | Out of market test activation payment rate | N/A | N/A | N/A | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems Fixed rate as defined in this document |
| HOEP _h | Hourly Ontario Energy Price | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| $LCD_{k,h}^m$ | Line Connection Demand (KW) | 2 and 3 | 3 | 3 | <ul style="list-style-type: none"> RMS presentation is in units of KW to 2 decimal places. Unit changes to MW to 3 decimal places prior to transfer to the Transmission Tariff Demand Calculator (TTDC). Unit changes to KW to 3 decimal places prior to transfer to CRS. |
| $MAX_CAP_{k,h}^{m,t}$ | Maximum Capacity | 2 | 3 | 3 | |
| MC_h^m | Minimum Consumption | 1 | 1 | 1 | |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MI | Ordered matrix of and corresponding IOG <i>settlement amounts</i> | 1 and 2 | 2 | 2 | <ul style="list-style-type: none"> Derived set of variables and therefore not published on <i>settlement statements</i>. |
| MLP _{k,h} ^{m,t} | Minimum Loading Point | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| MLP_CONS _{k,h} ^{m,t} | Minimum Loading Point for a steam turbine resource or a combustion turbine resource associated to a pseudo unit | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| MQSI _{k,h} ^{m,t} | Market Quantity Scheduled for Injection | 1 | 1 | 1 | |
| MQSI _{adj} _{k,h} ^{m,t} | Adjusted Market Quantity Scheduled for Injection | 1 | 1 | 1 | <ul style="list-style-type: none"> Derived variable and therefore not published on <i>settlement statements</i>. |
| MQSW _{k,h} ^{m,t} | Market Quantity Scheduled for Withdrawal | 1 | 1 | 1 | |
| NSD _{k,h} ^m | Network Service Demand (KW) | 2 and 3 | 3 | 3 | <ul style="list-style-type: none"> RMS presentation is in units of KW to 2 decimal places. Unit changes to MW to 3 decimal places prior to transfer to the Transmission Tariff Demand Calculator (TTDC). Unit changes to KW to 3 decimal places prior to transfer to CRS. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $OCMW_k^i$ | Over committed MWs | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| OP | Operating Profit Function | N/A See Section 2.4 | N/A See Section 2.4 | N/A See Section 2.4 | <ul style="list-style-type: none"> This acronym is associated with the operating profit equation used within the CMSC equation. |
| $OPCAP_{k,h}^{m,t}$ | Operating Capacity | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| $PB_{IM}_h^t$ | Price bias adjustment factor for import transactions | 2 | 2 | 2 | <ul style="list-style-type: none"> Published on by the <i>IESO</i> on a periodic basis. |
| $PB_{EX}_h^t$ | Price bias adjustment factor for export transactions | 2 | 2 | 2 | <ul style="list-style-type: none"> Published on by the <i>IESO</i> on a periodic basis. |
| $PD_{BE}_{k,h}^{i,t}$ | <i>Energy Offer</i> submitted into the <i>Pre-dispatch</i> | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Confirmations passed to <i>market participants</i> as <i>bids/offers</i> (“<i>dispatch data</i>”) are received. |
| $PD_{BL}_{k,h}^{i,t}$ | <i>Energy bids</i> submitted into the <i>Pre-dispatch</i> | N/A | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Confirmations passed to <i>market participants</i> as <i>bids/offers</i> (“<i>dispatch data</i>”) are received. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|---------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD_DQSI _{k,h} ^{i,t} | <i>Pre-dispatch</i> quantity scheduled for injection at an <i>intertie metering point</i> | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| PD_DQSW _{k,h} ^{i,t} | <i>Pre-dispatch</i> quantity scheduled for withdrawal at an <i>intertie metering point</i> | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Passed to <i>market participants</i> via dispatch messaging. |
| PD_ELMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the export zone | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| PD_EMP _h ^{m,t} | Pre-dispatch energy market price for Ontario | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| PD_ILMP _h ^{m,t} | <i>Pre-dispatch</i> constrained schedule price for an <i>intertie metering point</i> in the import zone | 2 | 2 | 2 | <ul style="list-style-type: none"> MIM Publication. |
| PROR _{r,h} ^{m,t} | 5-minute Operating Reserve Price | 2 | 2 | 5 | <ul style="list-style-type: none"> MIM Publication. |
| PST _{k,h} ^{p,t} | Steam Turbine Portion from Daily Generator Data | 1 | 1 | 1 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PTS-L | Provincial Transmission Service Line Connection Service Rate (\$/KW) | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Subject to the OEB “Ontario Transmission Rate Order”. |
| PTS-N | Provincial Transmission Service Network Service Rate (\$/KW) | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Subject to the OEB “Ontario Transmission Rate Order”. |
| PTS-T | Provincial Transmission Service Transformation Connection Service Rate (\$/KW) | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. Subject to the OEB “Ontario Transmission Rate Order”. |
| $QTR_{k,h}^{i,j}$ | Quantity of Transmission Rights Owned | PENDING | 0 | 0 | <ul style="list-style-type: none"> TR’s are in denominations to the nearest MW. Upstream publication accuracy currently being resolved. |
| RAC_k^m | Resource Available Capacity | N/A | 3 | 3 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| $SQEI_{k,h}^{i,t}$ | Scheduled Quantity of Energy Injected at an <i>intertie metering point</i> | 1 | 1 | 1 | |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $SQEW_{k,h}^{i,t}$ | Scheduled Quantity of Energy Withdrawn at an <i>intertie metering point</i> | 1 | 1 | 1 | |
| $SQROR_{r,k,h}^{m,t}$ | Scheduled Quantity of class r <i>Operating Reserve</i> | 1 | 1 | 1 | |
| $TAOR_{k,h}^{m,t}$ | Total Accessible Operating Reserve | 2 | 3 | 3 | |
| $TCD_{k,h}^m$ | Transformation Connection Demand (KW) | 2 and 3 | 3 | 3 | <ul style="list-style-type: none"> • RMS presentation is in units of KW to 2 decimal places. • Unit changes to MW to 3 decimal places prior to transfer to the Transmission Tariff Demand Calculator (TTDC). • Unit changes to KW to 3 decimal places prior to transfer to CRS. |
| $TD_{k,h,c}$ | Total Market Settlement Amount | N/A | N/A | N/A | <ul style="list-style-type: none"> • N/A- notational description of an aggregated financial amount (reported to the nearest cent when applicable). |
| TP_c | Tariff price | N/A | N/A | N/A | <ul style="list-style-type: none"> • N/A – notational description of tariff rate (reported to the nearest cent when applicable). |
| TRMP | TR Market Clearing Price | 2 | 2 | 2 | |

| Variable referenced in Section 2.1 | Data Description | Number of DECIMAL PLACES (values published by upstream systems) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (values received by CRS) | MAXIMUM Number of SIGNIFICANT DIGITS to the right of the decimal (externally passed from CRS in settlement statements or data files) | Comments |
|------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| TRCAD | TR Clearing Account Disbursements | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| TRCAD _E | TR Clearing Account Disbursements for Exporters | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| TRCAD _L | TR Clearing Account Disbursements for Loads | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |
| TRCAR | TR Shortfall Recovery Amount | N/A | 2 | 2 | <ul style="list-style-type: none"> Not published via upstream <i>IESO</i> systems. |

2.4 Rounding Conventions – by Charge Type

2.4.1 General Notes

- The table below references significant digits to the right of the decimal place. This should NOT be confused with the number of decimal places allowable in some columns on the *settlement statements* and data files as set out in, “Format Specification for Settlement Statements and Data Files.”
- All **settlement amounts** reported by the *IESO* settlements system are rounded to the nearest cent (i.e. to two decimal places) on *settlement statements*, although some settlement calculations may only yield 1 significant digit to the right of the decimal place. In these instances, the financial amount is NOT further rounded to the nearest ten cents. **The table below does not include the final rounding step to the nearest cent, as this is done for ALL settlement amounts. Rather, it describes any intermediate calculations (particularly, those involving division) that involve rounding prior to the final calculation of the settlement amount.**

2.4.2 Key to the Table of Rounding Conventions

| Column Name | Description |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Charge Type Number | This table contains an entry for each <i>charge type</i> listed in Section 2.2 of this document (“IESO Charge Types and Equations”). |
| Charge Type Name | The name of each of the <i>charge types</i> . |
| INPUT VARIABLES Least number of significant digits to the right of the decimal | In terms of assessing the accuracy of the final <i>settlement amount</i> , this column is derived from the settlement variable received by the <i>settlement</i> system with the LEAST number of significant digits to the right of the decimal place. |
| INPUT VARIABLES Maximum number of significant digits to the right of the decimal | In terms of assessing the accuracy of the final <i>settlement amount</i> , this column is derived from the settlement variable received by the <i>settlement</i> system with the MAXIMUM number of significant digits to the right of the decimal place. |
| INTERMEDIATE Rounding done by Settlements | This column indicates whether or not any INTERMEDIATE rounding is done by the <i>IESO settlement process</i> . This does NOT include the final rounding of settlement amounts to 2 decimal places as the last step in the calculation of ALL charge types. |

| Column Name | Description |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | This column ONLY describes an intermediate calculation of the <i>settlement amount</i> in which rounding occurs PRIOR to the final rounding of the <i>settlement amount</i> to the nearest cent. |
| Disposition of INTERMEDIATE CALCULATION 1 | This column describes the disposition of the rounded value resulting from Intermediate Calculation 1. |
| INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | This column ONLY describes an intermediate calculation of the <i>settlement amount</i> in which rounding occurs PRIOR to the final rounding of the <i>settlement amount</i> to the nearest cent. |
| Disposition of INTERMEDIATE CALCULATION 2 | This column describes the disposition of the rounded value resulting from Intermediate Calculation 2. |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 52 | Transmission Rights Auction Settlement Debit | 0 | 2 | No | | | | |
| 100 | Net Energy Market Settlement for Generators and Dispatchable Load | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 101 | Net Energy Market Settlement for Non-dispatchable Load | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 102 | TR Clearing Account Credit | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 103 | Transmission Charge Reduction Fund | 2 | 3 | Yes | Numerator: Difference between SQEW – SQEI by <i>inertie zone</i> Denominator: 12 Resulting Decimals: 3 | Resulting value included with the TCRF calculation at that particular zone for the <i>metering interval</i> in question. | | |
| 104 | Transmission Rights Settlement Credit | 0 | 2 | Yes | Numerator: Summation of the zonal price difference ($EMP_{h^{it}} - EMP_{h^{it}}$) Denominator: 12 Resulting Decimals: 5 | Multiplied by QTR for the <i>settlement hour</i> . | | |
| 105 | Congestion Management Settlement Credit for Energy | 1 | 3 | Yes | AQEI multiplied by 12 or AQEW multiplied by 12 Resulting Decimals: 3 | Used in the calculation of OP(EMP, AQEI, BE) or OP(EMP, AQEW, BL) as the case may be. | Numerators OP(EMP, MQSI, BE) OP(EMP, DQSI, BE) OP(EMP, AQEI, BE) OP(EMP, MQSW, BL) OP(EMP, DQSW, BL) OP(EMP, AQEW, BL) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. |
| 106 | Congestion Management Settlement Credit for 10 Minute Spinning Reserve | 1 | 2 | Yes | Numerators OP(PROR, MQSR, BR) OP(PROR, DQSR, BR) OP(PROR, AQOR, BR) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
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| 107 | Congestion Management Settlement Credit for 10 Minute Non-spinning Reserve | 1 | 2 | Yes | Numerators OP(PROR, MQSR, BR) OP(PROR, DQSR, BR) OP(PROR, AQOR, BR) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. | | |
| 108 | Congestion Management Settlement Credit for 30 Minute Operating Reserve | 1 | 2 | Yes | Numerators OP(PROR, MQSR, BR) OP(PROR, DQSR, BR) OP(PROR, AQOR, BR) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. | | |
| 111 | Northern Pulp and Paper Mill Electricity Transition Program Settlement Amount | 1 | 3 | No | | | | |
| 112 | Ontario Power Generation Rebate | 2 | 3 | No | | | | |
| 113 | Additional Compensation for Administrative Pricing Credit | 1 | 3 | Yes | For the calculation outlined in 7.8.4A.16 only: for dispatchable <i>facilities</i> located within Ontario only AQEI multiplied by 12 or AQEW multiplied by 12 Resulting Decimals: 3 | (For the calculation outlined in 7.8.4A.16 only) For dispatchable <i>facilities</i> located within Ontario only: Used in the calculation of OP(EMP, AQEI, BE) or OP(EMP, AQEW, BL) as the case may be. | For the calculation outlined in 7.8.4A.16 only: Numerators: for dispatchable <i>facilities</i> located within Ontario: OP(EMP, AQEI, BE) OP(EMP, AQEW, BL) for Imports or Exports: | (For the calculation outlined in 7.8.4A.16 only) The results are used in the final calculation |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
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| | | | | | | | OP(EMP, DQSI, BE) OP(EMP, DQSW, BL) Denominator: 12 Resulting Decimals: 2 | |
| 114 | Outage Cancellation/ Deferral Settlement Credit | 2 | 2 | No | | | | |
| 115 | Unrecoverable Testing Costs Credit | 2 | 2 | No | | | | |
| 116 | Tieline Maintenance Reliability Credit | 2 | 2 | No | | | | |
| 118 | Emergency Energy Rebate | 1 | 3 | No | | | | |
| 119 | Station Service Reimbursement Credit | 2 | 2 | No | | | | |
| 120 | Local Market Power Debit | 2 | 2 | No | | | | |
| 121 | Northern Energy Advantage Program Settlement Amount | 1 | 3 | No | | | | |
| 122 | Ramp Down Settlement Amount | 1 | 3 | Yes | AQEI multiplied by 12 or AQEW multiplied by 12 | Used in the calculation of OP(EMP, AQEI, BE) or OP(EMP, AQEW, BL) as the case may be. | Numerators OP(EMP, MQSI, BE) OP(EMP, DQSI, BE) | Profits compared as applicable. |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| | | | | | Resulting Decimals: 3 | | OP(EMP, AQEI, BE) OP(EMP, MQSW, BL) OP(EMP, DQSW, BL) OP(EMP, AQEW, BL) Denominator: 12 Resulting Decimals: 2 | |
| 123 | MACD Enforcement Activity Amount | 2 | 2 | No | | | | |
| 124 | SEAL Congestion Management Settlement Credit Amount | 2 | 2 | No | | | | |
| 130 | Intertie Offer Settlement Credit – Energy | 1 | 3 | Yes | Numerators OP(EMP, MQSI, BE) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. | | |
| 133 | Generator Cost Guarantee Payment | 1 | 3 | No | | | | |
| 134 | Demand Response Credit | 2 | 2 | No | | | | |
| 135 | Real-time Import Failure Charge | 1 | 3 | Yes | TERM 1 – Failure Charge Numerator: EMP + PB_IM – PD_EMP Denominator: 12 | TERM 1 and TERM 2 compared as applicable. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
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| | | | | | Resulting Decimals: 2 TERM 2 – Price Cap Numerator: $MAX(0,EMP) * RT_ISD$ Denominator: 12 Resulting Decimals: 2 | | | |
| 136 | Real-time Export Failure Charge | 1 | 3 | Yes | TERM 1 – Failure Charge Numerator: $PD_EMP - EMP - PB_EX$ Denominator: 12 Resulting Decimals: 2 TERM 2 – Price Cap Numerator: $MAX(0,PD_EMP) * RT_ESD$ Denominator: 12 Resulting Decimals: 2 | TERM 1 and TERM 2 compared as applicable. | | |
| 137 | Generation Cost Guarantee – Annual Carbon Charge Settlement Amount | 1 | 3 | No | | | | |
| 140 | Fixed Energy Rate Settlement Amount | 1 | 3 | No | | | | |
| 141 | Fixed Wholesale Charge Rate Settlement Amount | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 142 | Regulated Price Plan Settlement Amount | 1 | 3 | No | | | | |
| 143 | NUG Contract Adjustment Settlement Amount | 1 | 3 | No | | | | |
| 144 | Regulated Nuclear Generation Adjustment Amount | 1 | 3 | No | | | | |
| 145 | Regulated Hydroelectric Generation Adjustment Amount | 1 | 3 | No | | | | |
| 146 | Global Adjustment Settlement Amount | 1 | 3 | No | | | | |
| 147 | Class A – Global Adjustment Settlement Amount | 1 | 3 | No | | | | |
| 148 | Class B – Global Adjustment Settlement Amount | 1 | 3 | No | | | | |
| 149 | Regulated Price Plan Retailer Settlement Amount | 1 | 3 | No | | | | |
| 150 | Net Energy Market Settlement Uplift | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 155 | Congestion Management Settlement Uplift | 1 | 3 | No | | | | |
| 161 | Northern Pulp and Paper Mill Electricity Transition Program Balancing Amount | 1 | 3 | No | | | | |
| 162 | Ontario Power Generation Rebate Debit | 1 | 3 | No | | | | |
| 163 | Additional Compensation for Administrative Pricing Debit | 1 | 3 | No | | | | |
| 164 | Outage Cancellation/Deferral Debit | 1 | 3 | No | | | | |
| 165 | Unrecoverable Testing Costs Debit | 1 | 3 | No | | | | |
| 166 | Tieline Reliability Maintenance Debit | 1 | 3 | No | | | | |
| 167 | Emergency Energy and EDRP Debit | 1 | 3 | No | | | | |
| 168 | TR Market Shortfall Debit | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 169 | Station Service Reimbursement Debit | 1 | 3 | No | | | | |
| 170 | Local Market Power Rebate | 1 | 3 | No | | | | |
| 171 | Northern Energy Advantage Program Balancing Amount | 1 | 3 | No | | | | |
| 173 | MACD Enforcement Activity Balancing Amount | 2 | 2 | No | | | | |
| 183 | Generator Cost Guarantee Recovery Debit | 1 | 3 | No | | | | |
| 184 | Demand Response Debit | 2 | 2 | No | | | | |
| 186 | Intertie Failure Charge Rebate | 1 | 3 | No | | | | |
| 190 | Fixed Energy Rate Balancing Amount | 2 | 2 | No | | | | |
| 191 | Fixed Wholesale Charge Rate Balancing Amount | 2 | 2 | No | | | | |
| 192 | Regulated Price Plan Balancing Amount | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 193 | NUG Contract Adjustment Balancing Amount | 2 | 2 | No | | | | |
| 194 | Regulated Nuclear Generation Balancing Amount | 2 | 2 | No | | | | |
| 195 | Regulated Hydroelectric Generation Balancing Amount | 2 | 2 | No | | | | |
| 196 | Global Adjustment Balancing Amount | 2 | 2 | No | | | | |
| 197 | Global Adjustment-Special Programs Balancing Amount | 2 | 2 | No | | | | |
| 198 | Renewable Generation Balancing Amount | 2 | 2 | No | | | | |
| 199 | Regulated Price Plan Retailer Balancing Amount | 2 | 2 | No | | | | |
| 200 | 10 Minute Spinning Reserve Market Settlement Credit. | 1 | 2 | No | | | | |
| 201 | 10 Minute Spinning Reserve Market Shortfall Rebate | 1 | 3 | No | | | | |
| 202 | 10 Minute Non-spinning Reserve | 1 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Market Settlement Credit | | | | | | | |
| 203 | 10 Minute Non-spinning Reserve Market Shortfall Rebate | 1 | 3 | No | | | | |
| 204 | 30 Minute Operating Reserve Market Settlement Credit | 1 | 2 | No | | | | |
| 205 | 30 Minute Operating Reserve Market Shortfall Rebate | 1 | 3 | No | | | | |
| 206 | 10-Minute spinning non-Accessibility Settlement Amount | 1 | 3 | No | | | | |
| 208 | 10-Minute non-Spinning non-Accessibility Settlement Amount | 1 | 3 | No | | | | |
| 210 | 30-Minute non-Accessibility Settlement Amount | 1 | 3 | No | | | | |
| 250 | 10 Minute Spinning Market Reserve Hourly Uplift | 1 | 3 | No | | | | |
| 251 | 10 Minute Spinning Market Reserve Shortfall Debit | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 252 | 10 Minute Non-spinning Market Reserve Hourly Uplift | 1 | 3 | No | | | | |
| 253 | 10 Minute Non-spinning Market Reserve Shortfall Debit | 1 | 3 | No | | | | |
| 254 | 30 Minute Operating Reserve Market Hourly Uplift | 1 | 3 | No | | | | |
| 255 | 30 Minute Operating Reserve Market Shortfall Debit | 1 | 3 | No | | | | |
| 400 | Black Start Capability Settlement Credit | 2 | 2 | No | | | | |
| 404 | Regulation Service Settlement Credit | 2 | 2 | No | | | | |
| 406 | Emergency Demand Response Credit | 2 | 2 | No | | | | |
| 410 | IESO-Controlled Grid Special Operations Credit | 2 | 2 | No | | | | |
| 450 | Black Start Capability Settlement Debit | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 451 | Hourly Reactive Support and Voltage Control Settlement Debit | 1 | 3 | No | | | | |
| 452 | Monthly Reactive Support and Voltage Control Settlement Debit | 1 | 3 | No | | | | |
| 454 | Regulation Service Settlement Debit | 1 | 3 | No | | | | |
| 460 | IESO-Controlled Grid Special Operations Debit | 2 | 2 | No | | | | |
| 500 | Must Run Contract Settlement Credit | 2 | 2 | No | | | | |
| 550 | Must Run Contract Settlement Debit | 1 | 3 | No | | | | |
| 600 | Network Service Credit | 2 | 3 | No | | | | |
| 601 | Line Connection Service Credit | 2 | 3 | No | | | | |
| 602 | Transformation Connection Service Credit | 2 | 3 | No | | | | |
| 603 | Export Transmission Service Credit | 1 | 2 | No | | | | |

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|--------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 650 | Network Service Charge | 2 | 3 | No | | | | |
| 651 | Line Connection Service Charge | 2 | 3 | No | | | | |
| 652 | Transformation Connection Service Charge | 2 | 3 | No | | | | |
| 653 | Export Transmission Service Charge | 1 | 2 | No | | | | |
| 700 | Dispute Resolution Settlement Credit | 2 | 2 | No | | | | |
| 702 | Debt Retirement Credit | 2 | 2 | No | | | | |
| 703 | Rural and Remote Settlement Credit | 2 | 2 | No | | | | |
| 704 | OPA Administration Credit | 2 | 2 | No | | | | |
| 705 | Ontario Fair Hydro Plan First Nations On-reserve Delivery Amount | 2 | 2 | No | | | | |
| 706 | Ontario Fair Hydro Plan Distribution Rate Protection Amount | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 750 | Dispute Resolution Settlement Debit | 2 | 2 | No | | | | |
| 751 | Dispute Resolution Board Service Debit | 2 | 2 | No | | | | |
| 752 | Debt Retirement Charge | 2 | 3 | No | | | | |
| 753 | Rural and Remote Settlement Debit | 2 | 3 | No | | | | |
| 754 | OPA Administration Charge | 1 | 3 | No | | | | |
| 755 | MOE - Ontario Fair Hydro Plan First Nations On-reserve Delivery Balancing Amount | 2 | 2 | No | | | | |
| 756 | MOE - Ontario Fair Hydro Plan Distribution Rate Protection Balancing Amount | 2 | 2 | No | | | | |
| 850 | Market Participant Default Settlement Debit (recovery) | 2 | 2 | No | | | | |
| 851 | Market Participant Default Interest Debit | 2 | 2 | No | | | | |
| 900 | GST/HST Credit | 2 | 2 | No | | | | |
| 950 | GST/HST Debit | 2 | 2 | No | | | | |

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|--------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1050 | Self-Induced Dispatchable Load CMSC Clawback | 1 | 3 | Yes | AQEW multiplied by 12 Resulting Decimals: 3 | Used in the calculation of OP(EMP, AQEW, BL) as the case may be. | Numerators OP(EMP, MQSW, BL) OP(EMP, DQSW, BL) OP(EMP, AQEW, BL) OP(EMP, MC, BL) Denominator: 12 Resulting Decimals: 2 | Profits compared as applicable. |
| 1051 | Ramp-Down CMSC Claw Back | 2 | 2 | No | | | | |
| 1101 | Real-Time Energy Settlement Amount for Dispatchable Generators | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 1103 | Real-Time Energy Settlement Amount for Dispatchable Loads | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 1111 | Real-Time Energy Settlement Amount for Imports | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 1113 | Real-Time Energy Settlement Amount for Exports | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 1114 | Real-Time Energy Settlement Amount for Non-Dispatchable Generators | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1115 | Real-Time Energy Settlement Amount for Non-Dispatchable Load | 1 | 3 | Yes | Numerator: BCQ Denominator: 12 Resulting Decimals: 3 | BCQ quantities Multiplied by EMP when applicable. | | |
| 1130 | Day-Ahead Intertie Offer Guarantee Settlement Credit | 1 | 3 | Yes | FOR EACH 5-MINUTE METERING INTERVAL: Numerators OP[EMP, MIN(DQSI, PDR_DQSI), PDR_BE] Denominator: 12 Resulting Decimals: 2 | Results for each 5-minute <i>metering interval</i> are summed for the hour. Profits compared as applicable. | | |
| 1131 | Intertie Offer Guarantee Settlement Credit | 1 | 3 | Yes | For each 5 minute metering interval: RT-IOG – Real Time IOG Numerator OP(EMP,MQSI,BE) Denominator: 12 Resulting Decimal: 2 DA-IOG - Day-Ahead IOG Component 1 Numerator OP(EMP, Min(DA_DQSI,DQSI),DA_BE) | For DA-IOG, Component 1, Component 2 and Component 3 are compared as applicable. Results of RT-IOG and DA-IOG are compared in IOG OFFSET component. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|---------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | | | | | Denominator: 12 Resulting Decimal: 2 Component 2 Numerator $XDA_BE - \text{MAX}(0, XBE)$ Denominator: 12 Resulting Decimal: 2 Component 3 Numerator $OP(EMP, MQSI, BE),$ $OP(EMP, DA_DQSI, BE)$ $OP(EMP, DQSI, BE)$ Denominator: 12 Resulting Decimal: 2 IOG Rate Resulting Decimal: 5 | | | |
| 1133 | Day-Ahead Generation Cost Guarantee Payment | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|---------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1134 | Day-Ahead Linked Wheel Failure Charge | 1 | 3 | Yes | RT_EFC_DALW and RT_IFC_DALW for each 5-minute metering interval are summed for the hour. Resulting Decimal: 2 | Results are compared as applicable. | | |
| 1135 | Day-Ahead Import Failure Charge | 1 | 3 | Yes | TERM 1 – Operating Profit („OP”) Function used to calculate Failure Charge OP(PD_EMP, DA_DQSI, DA_BE) OP(PD_EMP, PD_DQSI, DA_BE) Resulting Decimals: 2 TERM 2 – Operating Profit („OP”) Function used to calculate Failure Charge OP(PD_EMP, DA_DQSI, PD_BE) OP(PD_EMP, PD_DQSI, PD_BE) Resulting Decimals: 2 | TERM 1, TERM 2 and TERM 3 compared as applicable. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
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| | | | | | <p>TERM 3 – Price cap</p> <p>Numerator</p> $\text{Max}(0, \text{PD_EMP}) \times \text{DA_ISD}$ <p>Denominator: 12 Resulting Decimals: 2</p> | | | |
| 1136 | Day-Ahead Export Failure Charge | 1 | 3 | Yes | <p>TERM 1 – Operating Profit („OP”) Function used to calculate Failure Charge</p> <p>OP(PD_EMP, DA_DQSW, DA_BL) OP(PD_EMP, PD_DQSW, DA_BL) Resulting Decimals: 2</p> <p>TERM 2 – Operating Profit („OP”) Function used to calculate Failure Charge</p> <p>OP(PD_EMP, DA_DQSW, PD_BL) OP(PD_EMP, PD_DQSW, PD_BL)</p> | TERM 1, TERM 2 and TERM 3 compared as applicable. | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | | | | | Resulting Decimals: 2 | | | |
| 1137 | Intertie Offer Guarantee Reversal | 2 | 2 | No | | | | |
| 1138 | Day-Ahead Fuel Cost Compensation Credit | 2 | 2 | No | | | | |
| 1139 | Intertie Failure Charge Reversal | 2 | 2 | No | | | | |
| 1142 | Ontario Fair Hydro Plan Eligible RPP Consumer Discount Settlement Amount | 2 | 2 | No | | | | |
| 1143 | Ontario Fair Hydro Plan Eligible Non-RPP Consumer Discount Settlement Amount | 2 | 2 | No | | | | |
| 1144 | Ontario Fair Hydro Plan Financing Entity Amount | 2 | 2 | No | | | | |
| 1145 | Ontario Fair Hydro Plan Financing Entity Interest | 2 | 2 | No | | | | |
| 1148 | GA Energy Storage Injection Reimbursement | 2 | 2 | No | | | | |
| 1188 | Day-Ahead Fuel Cost Compensation Debit | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1192 | Ontario Fair Hydro Plan Eligible RPP Consumer Discount Balancing Amount | 2 | 2 | No | | | | |
| 1193 | Ontario Fair Hydro Plan Eligible Non-RPP Consumer Discount Balancing Amount | 2 | 2 | No | | | | |
| 1194 | Ontario Fair Hydro Plan Financing Entity Balancing Amount | 2 | 2 | No | | | | |
| 1195 | Ontario Fair Hydro Plan Financing Entity Balancing Interest | 2 | 2 | No | | | | |
| 1300 | Capacity Based Demand Response Program Availability Payment Settlement Amount | 1 | 3 | No | | | | |
| 1301 | Capacity Based Demand Response Program Availability Over-Delivery Settlement Amt | 1 | 3 | No | | | | |
| 1302 | Capacity Based Demand Response Program | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Availability Set-Off Settlement Amount | | | | | | | |
| 1303 | Capacity Based Demand Response Program Utilization Payment Settlement Amount | 1 | 3 | No | | | | |
| 1304 | Capacity Based Demand Response Program Utilization Set-Off Settlement Amount | 1 | 3 | No | | | | |
| 1305 | Capacity Based Demand Response Program Planned Non-Performance Event Set-Off Amt | 1 | 3 | No | | | | |
| 1306 | Capacity Based Demand Response Program Measurement Data Set-Off Settlement Amt | 1 | 3 | No | | | | |
| 1307 | Capacity Based Demand Response Program Buy-Down Settlement Amount | 1 | 3 | No | | | | |
| 1308 | Capacity Based Demand Response Program Performance Breach Settlement Amount | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1309 | Demand Response Pilot – Availability Payment | 1 | 3 | No | | | | |
| 1310 | Demand Response Pilot – Availability Clawback | 1 | 3 | No | | | | |
| 1311 | Demand Response Pilot – Availability Charge | 1 | 3 | No | | | | |
| 1312 | Demand Response Pilot – Availability Adjustment | 1 | 3 | No | | | | |
| 1313 | Demand Response Pilot – Demand Response Bid Guarantee | 1 | 3 | No | | | | |
| 1314 | Capacity Obligation – Availability Payment | 1 | 3 | No | | | | |
| 1315 | Capacity Obligation – Availability Charge | 1 | 3 | No | | | | |
| 1316 | Capacity Obligation – Administration Charge | 1 | 3 | No | | | | |
| 1317 | Capacity Obligation – Dispatch Charge | 1 | 3 | No | | | | |
| 1318 | Capacity Obligation – Capacity Charge | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1319 | Capacity Obligation – Buy-Out Charge | 1 | 3 | No | | | | |
| 1320 | Capacity Obligation – Out of Market Activation Payment | 1 | 3 | No | | | | |
| 1321 | Capacity Obligation – Capacity Import Call Failure Charge | 1 | 3 | No | | | | |
| 1322 | Capacity Obligation – Capacity Deficiency Charge | 1 | 3 | No | | | | |
| 1323 | Capacity Obligation – In-Period UCAP Adjustment Charge | 1 | 3 | No | | | | |
| 1324 | Capacity Obligation – Availability Charge True-up Payment | 1 | 3 | No | | | | |
| 1325 | Capacity Obligation – Capacity Auction Charges True-up Payment | 1 | 3 | No | | | | |
| 1330 | On behalf of Former OPA for the DR2 Program – Availability Payment Settlement Amount | 1 | 3 | No | | | | |
| 1331 | On behalf of Former OPA for the DR2 Program – | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Availability Set-Off Settlement Amount | | | | | | | |
| 1332 | On behalf of Former OPA for the DR2 Program – Utilization Payment Settlement Amount | 1 | 3 | No | | | | |
| 1333 | On behalf of Former OPA for the DR2 Program – Utilization Set-Off Settlement Amount | 1 | 3 | No | | | | |
| 1334 | On behalf of Former OPA for the DR2 Program – Meter Data Set-Off Settlement Amount | 1 | 3 | No | | | | |
| 1335 | On behalf of Former OPA for the DR2 Program – Buy-Down Settlement Amount | 1 | 3 | No | | | | |
| 1336 | On behalf of Former OPA for the DR2 Program – Miscellaneous Settlement Amount | 1 | 3 | No | | | | |
| 1340 | On behalf of Former OPA for the DR3 Program – Availability Payment Settlement Amount | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1341 | On behalf of Former OPA for the DR3 Program – Availability Over-Delivery Settlement Amt | 1 | 3 | No | | | | |
| 1342 | On behalf of Former OPA for the DR3 Program – Availability Set-Off Settlement Amount | 1 | 3 | No | | | | |
| 1343 | On behalf of Former OPA for the DR3 Program – Utilization Payment Settlement Amount | 1 | 3 | No | | | | |
| 1344 | On behalf of Former OPA for the DR3 Program – Utilization Set-Off Settlement Amount | 1 | 3 | No | | | | |
| 1345 | On behalf of Former OPA for the DR3 Program – Planned Non-Performance Event Set-Off Amt | 1 | 3 | No | | | | |
| 1346 | On behalf of Former OPA for the DR3 Program – Meter Data Set-Off Settlement Amount | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1347 | On behalf of Former OPA for the DR3 Program – Buy-Down Settlement Amount | 1 | 3 | No | | | | |
| 1348 | On behalf of Former OPA for the DR3 Program – Miscellaneous Settlement Amount | 1 | 3 | No | | | | |
| 1350 | Capacity Based Recovery Amount for Class A Loads | 1 | 3 | No | | | | |
| 1351 | Capacity Based Recovery Amount for Class B Loads | 1 | 3 | No | | | | |
| 1380 | Demand Response 2 Availability Payment Balancing Amount | 2 | 2 | No | | | | |
| 1381 | Demand Response 2 Availability Set-Off Balancing Amount | 2 | 2 | No | | | | |
| 1382 | Demand Response 2 Utilization Payment Balancing Amount | 2 | 2 | No | | | | |
| 1383 | Demand Response 2 Utilization Set- | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Off Balancing Amount | | | | | | | |
| 1384 | Demand Response 2 Meter Data Set-Off Balancing Amount | 2 | 2 | No | | | | |
| 1385 | Demand Response 2 Buy-Down Balancing amount | 2 | 2 | No | | | | |
| 1386 | Demand Response 2 Miscellaneous Balancing amount | 2 | 2 | No | | | | |
| 1390 | Demand Response 3 Availability Payment Balancing Amount | 2 | 2 | No | | | | |
| 1391 | Demand Response 3 Availability Over-Delivery Balancing Amount | 2 | 2 | No | | | | |
| 1392 | Demand Response 3 Availability Set-Off Balancing Amount | 2 | 2 | No | | | | |
| 1393 | Demand Response 3 Utilization Payment Balancing Amount | 2 | 2 | No | | | | |
| 1394 | Demand Response 3 Utilization | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Set-Off Balancing Amount | | | | | | | |
| 1395 | Demand Response 3 Planned Non-Performance Event Set-Off Balancing Amount | 2 | 2 | No | | | | |
| 1396 | Demand Response 3 Meter Data Set-Off Balancing Amount | 2 | 2 | No | | | | |
| 1397 | Demand Response 3 Buy-Down Balancing Amount | 2 | 2 | No | | | | |
| 1398 | Demand Response 3 Miscellaneous Balancing Amount | 2 | 2 | No | | | | |
| 1400 | OPA Contract Adjustment Settlement Amount | 1 | 2 | No | | | | |
| 1401 | Incremental Loss Settlement Credit | 1 | 6 | No | | | | |
| 1402 | Hourly Condense System Constraints Settlement Credit | 1 | 5 | No | | | | |
| 1403 | Speed-no-load Settlement Credit | 1 | 2 | No | | | | |
| 1404 | Condense Unit Start-up and | 1 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | OM&A Settlement Credit | | | | | | | |
| 1405 | Hourly Condense Energy Costs Settlement Credit | 1 | 2 | No | | | | |
| 1406 | Monthly Condense Energy Costs Settlement Credit | 1 | 2 | No | | | | |
| 1407 | Condense Transmission Tariff Reimbursement Settlement Credit | 2 | 3 | No | | | | |
| 1408 | Condense Availability Cost Settlement Credit | 1 | 2 | No | | | | |
| 1409 | Monthly Condense System Constraints Settlement Credit | 1 | 2 | No | | | | |
| 1410 | Renewable Energy Standard Offer Program Settlement Amount | 1 | 3 | No | | | | |
| 1411 | Clean Energy Standard Offer Program Settlement Amount | 1 | 3 | No | | | | |
| 1412 | Feed-In Tariff Program Settlement Amount | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1413 | Renewable Generation Connection – Monthly Compensation Settlement Credit | 1 | 3 | No | | | | |
| 1414 | Hydroelectric Contract Initiative Settlement Amount | 1 | 3 | No | | | | |
| 1415 | Conservation Assessment Recovery | 1 | 3 | No | | | | |
| 1416 | Conservation and Demand Management - Compensation Settlement Credit | 1 | 3 | No | | | | |
| 1417 | Daily Condense Energy Costs Settlement Credit | 1 | 2 | No | | | | |
| 1418 | Biomass Non-Utility Generation Contracts Settlement Amount | 1 | 3 | No | | | | |
| 1419 | Energy from Waste (EFW) Contracts Settlement Amount | 1 | 3 | No | | | | |
| 1420 | Ontario Electricity Support Program Settlement Amount | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1421 | Capacity Agreement Settlement Credit | 0 | 2 | No | | | | |
| 1422 | Capacity Agreement Penalty Settlement Amount | 0 | 2 | No | | | | |
| 1423 | Energy Sales Agreement Settlement Credit | 0 | 3 | No | | | | |
| 1424 | Energy Sales Agreement Penalty Settlement Amount | 0 | 2 | No | | | | |
| 1425 | Hydroelectric Standard Offer Program Settlement Amount | 2 | 2 | No | | | | |
| 1427 | Non-Hydro Renewables Funding Amount | 2 | 2 | No | | | | |
| 1450 | OPA Contract Adjustment Balancing Amount | 2 | 2 | No | | | | |
| 1451 | Incremental Loss Offset Settlement Amount | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1457 | Ontario Electricity Rebate Balancing Amount | 2 | 2 | No | | | | |
| 1460 | Renewable Energy Standard Offer Program Balancing Amount | 2 | 2 | No | | | | |
| 1461 | Clean Energy Standard Offer Program Balancing Amount | 2 | 2 | No | | | | |
| 1462 | Feed-In Tariff Program Balancing Amount | 2 | 2 | No | | | | |
| 1463 | Renewable Generation Connection – Monthly Compensation Settlement Debit | 1 | 3 | No | | | | |
| 1464 | Hydroelectric Contract Initiative Balancing Amount | 2 | 2 | No | | | | |
| 1465 | Ontario Clean Energy Benefit (-10%) Program Balancing Amount | 2 | 2 | No | | | | |
| 1466 | Conservation and Demand Management - | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Compensation Balancing Amount | | | | | | | |
| 1467 | Ontario Rebate for Electricity Consumers (8% Provincial Rebate) Balancing Amount | 2 | 2 | No | | | | |
| 1468 | Biomass Non-Utility Generation Contracts Balancing Amount | 2 | 2 | No | | | | |
| 1469 | Energy from Waste (EFW) Contracts Balancing Amount | 2 | 2 | No | | | | |
| 1470 | Ontario Electricity Support Program Balancing Amount | 2 | 3 | No | | | | |
| 1471 | Capacity Agreement Balancing Amount | 2 | 2 | No | | | | |
| 1472 | Capacity Agreement Penalty Balancing Amount | 2 | 2 | No | | | | |
| 1473 | Energy Sales Agreement Balancing Amount | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1474 | Energy Sales Agreement Penalty Balancing Amount | 2 | 2 | No | | | | |
| 1475 | Hydroelectric Standard Offer Program Balancing Amount | 2 | 2 | No | | | | |
| 1477 | COVID-19 Energy Assistance Program (CEAP) Settlement Amount | 2 | 2 | No | | | | |
| 1487 | Non-Hydro Renewables Funding Balancing Amount | 2 | 2 | No | | | | |
| 1500 | Day-Ahead Production Cost Guarantee Payment – Component 1 and Component 1 Clawback | 1 | 3 | Yes | AQEI is multiplied by 12 Resulting decimal: 3 | Use in the calculation of OP(EMP,AQEI, DA_BE), | <p>For each 5 minute metering interval:</p> <p>Numerator</p> <p>OP(EMP,AQEI, DA_BE), OP(EMP,DQSI, DA_BE), OP(EMP,DA_DQSI, DA_BE)</p> <p>Denominator: 12 Resulting Decimal: 2</p> <p>Numerator</p> <p>DA_SNL</p> | Profits are compared as applicable. |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| | | | | | | | Denominator: 12 Resulting decimal: 2 Results for each 5-minute metering interval are summed for the hour. | |
| 1501 | Day-Ahead Production Cost Guarantee Payment – Component 2 | 1 | 3 | Yes | AQEI is multiplied by 12 Resulting decimal: 3 | Use in the calculation of OP(EMP,AQEI, DA_BE), OP(EMP,AQEI, BE) | For each 5 minute metering interval: Numerator OP(EMP,AQEI, DA_BE), OP(EMP,DQSI, DA_BE), OP(EMP,DA_DQSI, DA_BE) OP(EMP,OPCAP, DA_BE) OP(EMP,AQEI, BE), OP(EMP,DQSI, BE), OP(EMP,DA_DQSI, BE) OP(EMP,OPCAP, BE) Resulting Decimal: 2 | Profits are compared as applicable. |
| 1502 | Day-Ahead Production Cost Guarantee Payment – Component 3 and Component 3 Clawback | 1 | 3 | Yes | AQEI is multiplied by 12 Resulting decimal: 3 | Use in the calculation of OP(EMP,AQEI, BE), | For each 5 minute metering interval: Numerator OP(EMP,AQEI, BE), | Profits are compared as applicable. |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| | | | | | | | OP(EMP,DQSI, BE), OP(EMP,DA_DQSI, BE) OP(EMP,MLP, BE) Results for each 5-minute metering interval are summed for the hour. Resulting Decimal: 2 | |
| 1503 | Day-Ahead Production Cost Guarantee Payment – Component 4 | 1 | 3 | Yes | For each 5 minute metering interval: Numerators OP(PROR,30R_SQROR,BR), OP(PROR,10NS_SQROR,BR), OP(PROR,10S_SQROR,BR), Denominator: 12 Resulting Decimal: 2 | Profits are compared as applicable. | | |
| 1504 | Day-Ahead Production Cost Guarantee Payment – Component 5 | 1 | 3 | No | | | | |
| 1505 | Day-Ahead Production Cost Guarantee Reversal | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| 1510 | Day-Ahead Generator Withdrawal Charge | 1 | 3 | Yes | <p>For each 5 minute metering interval:</p> <p>Numerators OP(EMP,MLP,DA_BE) or OP(PD_EMP,MLP,DA_BE)</p> <p>Denominator: 12 Resulting Decimal: 2</p> | Results for each 5-minute metering interval are summed for the hour. | | |
| 1550 | Day-Ahead Production Cost Guarantee Recovery Debit | 1 | 3 | No | | | | |
| 1560 | Day-Ahead Generator Withdrawal Rebate | 1 | 3 | No | | | | |
| 1600 | Forecasting Service Settlement Amount | 1 | 3 | No | | | | |
| 1650 | Forecasting Service Balancing Amount | 1 | 3 | No | | | | |
| 1750 | Dispute Resolution Balancing Amount (Market) | 2 | 2 | No | | | | |
| 1753 | MOE - Rural and Remote Settlement Debit | 2 | 2 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES | | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|----------------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | | Least number of significant digits to the right of the decimal | Maximum number of significant digits to the right of the decimal | | | | | |
| 2148 | Class B Global Adjustment Prior Period Correction Settlement Amount | 2 | 2 | No | | | | |
| 2470 | MOE - Ontario Electricity Support Program Balancing Amount | 2 | 2 | No | | | | |
| 6000 | Ontario Fair Hydro Plan - Regulatory Asset Transfer Amount | 2 | 2 | No | | | | |
| 6050 | Ontario Fair Hydro Plan - Regulatory Asset Transfer Balancing Amount | 2 | 2 | No | | | | |
| 6147 | Class A Global Adjustment Deferral Recovery Amount | 1 | 3 | No | | | | |
| 6148 | Class B Global Adjustment Deferral Recovery Amount | 1 | 3 | No | | | | |
| 9147 | Class A Global Adjustment Smoothing Balancing Amount | 1 | 3 | No | | | | |
| 9148 | Class B Global Adjustment | 1 | 3 | No | | | | |

| Charge Type Number | Charge Type Name | INPUT VARIABLES Least number of significant digits to the right of the decimal | INPUT VARIABLES Maximum number of significant digits to the right of the decimal | Intermediate Rounding done by Settlements? | INTERMEDIATE CALCULATION 1 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 1 | INTERMEDIATE CALCULATION 2 (where intermediate rounding occurs) | DISPOSITION OF INTERMEDIATE CALCULATION 2 |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| | Smoothing Balancing Amount | | | | | | | |
| 9920 | Adjustment Account Credit | 1 | 1 | No | | | | |
| 9980 | Smart Metering Charge | 2 | 2 | No | | | | |
| 9982 | Ontario Rebate for Electricity Consumers (8% Provincial Rebate) Settlement Amount | 2 | 2 | No | | | | |
| 9983 | Ontario Electricity Rebate Settlement Amount | 2 | 2 | No | | | | |
| 9984 | COVID-19 Energy Assistance Program (CEAP) Balancing Amount | 2 | 2 | No | | | | |
| 9990 | IESO Administration Charge | 2 | 3 | No | | | | |
| 9992 | Ontario Clean Energy Benefit (-10%) Program Settlement Amount | 2 | 2 | No | | | | |
| 9996 | Recovery of Costs | 2 | 2 | No | | | | |

2.5 Settlement of Physical Bilateral Contracts

2.5.1 Governing Rules

Settlement of physical bilateral contracts is discussed in Section 2.1 of Chapter 8, of the *IESO market rules*. In summary this particular *market rules* Section prescribes the prices to be applied to a *Physical Bilateral Contract Quantity of Energy Sold* ($BCQ_{k,b,h}^{m,t}$) or a *Physical Bilateral Contract Quantity of Energy Bought* ($BCQ_{s,k,h}^{m,t}$) at a *delivery point* or an *inertie metering point*. This treatment is summarized in the table below with respect to each settlement variable defined in **Section 2.1** and *charge type* described in **Section 2.2** of this document.

| Location of Bilateral Contract | Settlement of Selling Market Participant | Settlement of Buying Market Participant | Charge Type |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Non-dispatchable <i>delivery point</i> | <ul style="list-style-type: none"> Debit the Physical Bilateral Contract Quantity of Energy Sold ($BCQ_{k,b,h}^{m,t}$) at the 5-Minute Energy Market Price within Ontario ($EMP_h^{m,t}$). | <ul style="list-style-type: none"> Credit the Physical Bilateral Contract Quantity of Energy Bought ($BCQ_{s,k,h}^{m,t}$) at the <i>Hourly Ontario Energy Price</i> (HOEP). | 101 |
| Dispatchable <i>delivery point</i> | <ul style="list-style-type: none"> Debit the Physical Bilateral Contract Quantity of Energy Sold ($BCQ_{k,b,h}^{m,t}$) at the 5-Minute Energy Market Price within Ontario ($EMP_h^{m,t}$). | <ul style="list-style-type: none"> Credit the Physical Bilateral Contract Quantity of Energy Bought ($BCQ_{s,k,h}^{m,t}$) at the 5-Minute Energy Market Price within Ontario ($EMP_h^{m,t}$). | 100 |
| <i>Inertie Metering Point</i> | <ul style="list-style-type: none"> Debit the Physical Bilateral Contract Quantity of Energy Sold ($BCQ_{k,b,h}^{m,t}$) at the 5-minute Energy Market Price at the <i>Interties</i> ($EMP_h^{i,t}$). | <ul style="list-style-type: none"> Credit the Physical Bilateral Contract Quantity of Energy Bought ($BCQ_{s,k,h}^{m,t}$) at the 5-minute Energy Market Price at the <i>Interties</i> ($EMP_h^{i,t}$). | 100 |

These financial credits and debits are then included the overall *settlement amounts* calculated for *charge types* 100 and 101 as per the equations in **Section 2.2**.

2.5.2 The Nature of the Bilateral Contract Quantity

| | | |
|---------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $BCQ_{s,k,h}^{m,t}$ | Physical Bilateral Contract Quantity of Energy bought. | Physical bilateral contract quantity of <i>energy</i> in MWh bought by <i>buying market participant</i> ‘k’ from <i>selling market participant</i> ‘s’ at <i>RWM</i> or <i>intertie metering point</i> ‘m’ for each <i>metering interval</i> ‘t’ in <i>settlement hour</i> ‘h’. |
| $BCQ_{k,b,h}^{m,t}$ | Physical Bilateral Contract Quantity of Energy sold. | Physical bilateral contract quantity of <i>energy</i> in MWh sold by <i>selling market participant</i> ‘k’ to <i>buying market participant</i> ‘b’ at <i>RWM</i> or <i>intertie metering point</i> ‘m’ for each <i>metering interval</i> ‘t’ in <i>settlement hour</i> ‘h’. |

The submission of *physical bilateral contract data* is governed by Section 2.4 of Chapter 8 of the *IESO market rules*. Furthermore, Section 2.3 of Chapter 8 describes 2 distinct “forms” of *physical bilateral contract data* that may be submitted by the *selling market participant*. Specifically, the two forms of such data are as follows:

1. **Absolute quantities:** specifying the absolute quantity of *energy* in MWh sold by the *selling market participant* to the *buying market participant* for each *settlement hour* at a particular *delivery point* or *intertie metering point*; and
2. **Derived quantities***:** specifying that the *physical bilateral contract quantity* shall be 100% of the *energy* sold by the *selling market participant* to the *buying market participant* for each *settlement hour* as derived from a particular *delivery point* value (i.e. NOT an *intertie metering point*).

Where:

- The *delivery point* chosen by the *selling market participant* must belong to either the *selling market participant* or the *buying market participant*.
- If the *delivery point* is designated as a sub-type ‘I’ (injection) *delivery point*, 100% of all injected *energy* for each *metering interval* in each applicable *settlement hour* shall be used regardless of any *physical allocation data*.
- If the *delivery point* is designated as a sub-type ‘W’ (withdrawal) *delivery point*, 100% of all withdrawn *energy* for each *metering interval* in each applicable *settlement hour* shall be used regardless of any *physical allocation data*.

*** See derived quantities examples that follow.

| Derived Quantities Example 1: <i>Delivery point</i> belongs to the <i>SELLING</i> market participant and is a sub-type ‘I’ (injection) <i>delivery point</i>. | | | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---|---|---|----|----|---|----|----|----|
| (note parity with EXAMPLE 3) | | | | | | | | | | | | |
| <i>Metering Interval</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ENERGY QUANTITY | 10 | 10 | 10 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 10 | 10 |
| ENERGY FLOW Injection (I) Withdrawal (W) | I | I | I | I | I | I | W | W | I | I | I | I |
| BCQ value used for settlement purposes (for both the buying and selling market participant) | 10 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| Total Quantity for the hour | 50 (SEE SECTION 2.5.3 FOR THE DATA PRESENTATION OF THE BILATERAL CONTRACT QUANTITY) | | | | | | | | | | | |

| Derived Quantities Example 2: <i>Delivery point</i> belongs to the <i>SELLING</i> market participant and is a sub-type ‘W’ (Withdrawal) <i>delivery point</i>. | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---|---|---|----|----|---|----|----|----|
| (note parity with EXAMPLE 4) | | | | | | | | | | | | |
| <i>Metering Interval</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ENERGY QUANTITY | 10 | 10 | 10 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 10 | 10 |
| ENERGY FLOW Injection (I) Withdrawal (W) | I | I | I | W | W | W | W | W | W | W | I | I |
| BCQ value used for settlement purposes (for both the buying and selling market participant) | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 |
| Total Quantity for the hour | 20 (SEE SECTION 2.5.3 FOR THE DATA PRESENTATION OF THE BILATERAL CONTRACT QUANTITY) | | | | | | | | | | | |

| Derived Quantities Example 3: <i>Delivery point</i> belongs to the <i>BUYING</i> market participant and is a sub-type ‘I’ (injection) <i>delivery point</i>. (note parity with EXAMPLE 1) | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---|---|---|----|----|---|----|----|----|
| <i>Metering Interval</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ENERGY QUANTITY | 10 | 10 | 10 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 10 | 10 |
| ENERGY FLOW Injection (I) Withdrawal (W) | I | I | I | I | I | I | W | W | I | I | I | I |
| BCQ value used for settlement purposes (for both the buying and selling market participant) | 10 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| Total Quantity for the hour | 50 (SEE SECTION 2.5.3 FOR THE DATA PRESENTATION OF THE BILATERAL CONTRACT QUANTITY) | | | | | | | | | | | |

| Derived Quantities Example 4: <i>Delivery point</i> belongs to the <i>BUYING</i> market participant and is a sub-type ‘W’ (Withdrawal) <i>delivery point</i>. (note parity with EXAMPLE 2) | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---|---|---|----|----|---|----|----|----|
| <i>Metering Interval</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ENERGY QUANTITY | 10 | 10 | 10 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 10 | 10 |
| ENERGY FLOW Injection (I) Withdrawal (W) | I | I | I | W | W | W | W | W | W | W | I | I |
| BCQ value used for settlement purposes (for both the buying and selling market participant) | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 |
| Total Quantity for the hour | 20 (SEE SECTION 2.5.3 FOR THE DATA PRESENTATION OF THE BILATERAL CONTRACT QUANTITY) | | | | | | | | | | | |

2.5.3 Time Resolution of Bilateral Contract Quantities and Rounding

Where a *physical bilateral contract* takes place at a non-dispatchable *delivery point*, the *Physical Bilateral Contract Quantity* of Energy Bought is reported by *settlement hour* as per the *market rules* (because the *Hourly Ontario Energy Price* is applied to this quantity – see Chapter 9, Section 3.3). At the same location however, the ‘Physical Bilateral Contract Quantity of Energy Sold’ is debited at the 5-minute energy market price. This latter, sold quantity must therefore be divided into 12, equal *metering intervals* (see Chapter 9, Section 3.1.6 of the *market rules*) and rounded to the appropriate number of significant digits (see Section 2.4 of this document). As a result, the summation of these 12, equal quantities may not equal the original, hourly value submitted in some circumstances due to this intermediate rounding. The table below summarizes this phenomenon in terms of the location sub-type and the applicable *charge type* used. The reader is directed to Section 2.4 of this document for further details.

| | | Location Type | Charge Type | Time Resolution used for Settlements Purposes | Intermediate Rounding Applied within Settlements System? |
|------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------|-------------|-----------------------------------------------|----------------------------------------------------------|
| BCQ_{s,k,h}^{m,t} | Physical Bilateral Contract Quantity of Energy bought. | Dispatchable <i>Delivery Point</i> (injection or withdrawal sub-type) | 100 | by <i>metering interval</i> | Yes – See Section 2.4 |
| | | Non-Dispatchable <i>Delivery Point</i> (injection or withdrawal sub-type) | 101 | by <i>settlement hour</i> | No |
| | | <i>Intertie metering point</i> | 100 | by <i>metering interval</i> | Yes – See Section 2.4 |
| BCQ_{k,b,h}^{m,t} | Physical Bilateral Contract Quantity of Energy sold. | Dispatchable <i>Delivery Point</i> (injection or withdrawal sub-type) | 100 | by <i>metering interval</i> | Yes – See Section 2.4 |
| | | Non-Dispatchable <i>Delivery Point</i> (injection or withdrawal sub-type) | 101 | by <i>metering interval</i> | Yes – See Section 2.4 |
| | | <i>Intertie metering point</i> | 100 | by <i>metering interval</i> | Yes – See Section 2.4 |

2.5.4 Allocation of Hourly Uplift Components Between Buying and Selling Market Participants

Hourly uplift is defined in Section 3.9.1 of Chapter 9 of the *IESO market rules* and may be “disaggregated” (sic) on *settlement statements* into its component parts as per Section 3.9.2. The following components *hourly uplift* charges may be allocated from the *buying market participant* to the *selling market participant* as per the *physical bilateral contract data* submitted by the *selling market participant* (see also, *IESO market rules*, Chapter 8, Section 2.2.2).

| Hourly Uplift Component Group | Associated Charge Types | Comments |
|------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Net Energy Market Settlement Credit (NEMSC) Hourly Uplift Component (also known as the “Losses” component) | 150 | <ul style="list-style-type: none"> This hourly uplift component is an aggregation of <i>charge types</i> 100 (NEMSC), 101 (NEMSC), 104 (TRSC), and 103 (TCRF). The aggregation of these <i>charge types</i> mathematically resolves down to the value of the difference between AQEI, AQEW, SQEW and SQEI quantities valued at the 5-minute Energy Market Reference Price ($EMP_h^{REF,t}$) for each <i>metering interval</i> in the <i>settlement hour</i>. |
| Operating Reserve Settlement Credit (ORSC) Hourly Uplift Component | 250 252 254 | <ul style="list-style-type: none"> Separate <i>charge types</i> for recovery of ORSC <i>settlement amounts</i> paid to <i>market participants</i> for each class of <i>operating reserve</i>. |
| Intertie Failure Charge Rebate (IFCR) Hourly Uplift Component | 186 | <p>Two components as follows:</p> <ol style="list-style-type: none"> <i>Charge type</i> 186: an aggregation of <i>charge types</i> 135 (Real-time Import Failure Charge), 136 (Real-time Export Failure Charge), 1134 (Day-Ahead Linked Wheel Failure Charge), 1135 (Day-Ahead Import Failure Charge) and 1136 (Day-Ahead Export Failure Charge). These <i>charge types</i> are primarily rebates back to <i>market participants</i> for amounts collected under these charges. |
| Congestion Management Settlement Credit (CMSC) Hourly Uplift Component | 155 | <ul style="list-style-type: none"> Includes recovery of CMSC payments for <i>energy</i> and each class of <i>operating reserve</i>. |

| Hourly Uplift Component Group | Associated Charge Types | Comments |
|------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transmission Rights Settlement Credit (TRSC) Hourly Uplift Component | NOT USED | <ul style="list-style-type: none"> INCLUDED WITH THE “NET ENERGY MARKET SETTLEMENT CREDIT (NEMSC) Hourly Uplift COMPONENT”. SEE NOTE ABOVE. |
| Transmission Charge Reduction Fund (TCRF) Hourly Uplift Component | NOT USED | <ul style="list-style-type: none"> INCLUDED WITH THE “NET ENERGY MARKET SETTLEMENT CREDIT (NEMSC) Hourly Uplift COMPONENT”. SEE NOTE ABOVE. |
| Operating Reserve Shortfall Settlement Debit (ORSSD) Hourly Uplift Component | 201 203 205 | <ul style="list-style-type: none"> Separate <i>charge types</i> for distribution of ORSSD <i>settlement amounts</i> received from <i>market participants</i> for shortfalls in the provision of each class of <i>operating reserve</i>. |

Each hourly uplift component group (i.e. not the individual *charge types* themselves) may be selected in any combination when the *physical bilateral contract data* is submitted by the *selling market participant*. Confirmation of this selection is included within the *settlement statement* supporting data files (type “B” records). A schematic overview of the format of type “B” records may be found within Table 3-2 of the IESO’s Technical Interface Document entitled, “Format Specification for Settlement Statement Files and Data Files”.

The effect of selecting an hourly uplift component group within *physical bilateral contract data*, is the creation of a “Reallocate Quantity (RQ)”.

The RQ specific to a single *physical bilateral contract* is exactly equal to the quantity of *energy* involved in the contract itself.

The RQ specific to a single *market participant* is equal to the sum of all RQ quantities for which the *market participant* is the *selling market participant*, minus the sum of all RQ quantities for which the *market participant* is the *buying market participant*.

The RQ specific to a single *market participant* for a particular hourly uplift component group is equal to the sum of all RQ quantities designated to for that particular hourly uplift component group within *physical bilateral contract data* for which the *market participant* is the *selling market participant*, minus the sum of all RQ quantities for which the *market participant* is the *buying market participant*.

This RQ quantity is then applied to the calculation of the *settlement amounts* for each *charge type* associated with the hourly uplift component group as per the table above.

Therefore, when calculating the RQ quantity for a particular hourly uplift *charge type* for *market participant* ‘k’ at a particular location ‘m’ during a particular *metering interval* ‘t’, the quantity may be expressed as follows:

$$RQ_{k,h}^{m,t} = \sum_{s,b} [BCQ_{k,b,h}^{m,t} - BCQ_{s,k,h}^{m,t}]$$

Where all variables are defined as per **Section 2.1**.

The RQ quantity is then used to either augment or decrease the *settlement amount* for the hourly uplift *charge type* “c” as follows:

$$\sum_c^{M,T} TD_{k,h,c} \times [(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) / \sum_k^{M,T} (AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})]$$

Where all variables are defined as per **Section 2.1**.

In the event that the term,

$$(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t} + RQ_{k,h}^{m,t}) < 0$$

Where:

$$RQ_{k,h}^{m,t} < 0 \text{ and } |RQ_{k,h}^{m,t}| > |(AQEW_{k,h}^{m,t} + SQEW_{k,h}^{i,t})| \text{ and } TD_{k,h,c} > 0$$

The calculation of the applicable hourly uplift charge type “c” will yield a net credit to the *buying market participant* as a result of the reallocated quantity exceeding their actual/scheduled withdrawals of *energy* for the *metering interval* ‘t’ in question.

The above mechanism applies to those “associated charge types” that are enumerated in the table at the beginning of this Section. See Section 2.2 for specific listings of *charge types* and their respective equations.

2.6 Exemptions from the Day-Ahead Import Failure Charge, Day-Ahead Export Failure Charge, and Day-Ahead Linked Wheel Failure Charge

2.6.1 Purpose of this Section

This section describes how Day-Ahead Import transactions are subject to an “Offer Price Test” in order to determine if they are exempt from the Day-Ahead Import Failure Charge (*charge type* 1135), Day-Ahead Export Failure Charge (*charge type* 1136) and Day-Ahead Linked Wheel Failure Charge (*charge type* 1134)².

Generally speaking the applicability of the five Intertie Failure charges³ is affected by the “Reason Codes” attached to the applicable *interchange schedule* received by the *Settlement Process*. The impact of these Reason Codes is outlined in Table 3-5 of the *IESO* Technical Interface document entitled, “Format Specifications for Settlement Statement Files and Data Files” (IMP_SPEC_0005). As noted in that table however, day-ahead import transactions arranged in the *pre-dispatch-of-record* that include the ‘AUTO’, ‘NY90’ or ‘ADQh’, or ‘ORA’ Reason Codes in the resulting real-time dispatch will be further subject to an “Offer Price Test” which determines whether or not the transaction in question is in fact exempt from the Day-Ahead Failure Charges.

2.6.2 Objective of the “Offer Price Test”

The main objective of the Offer Price Test is to grant an exemption from the DA-IFC, DA-EFC and DA-LWFC for those import and export transactions that make a best effort to ensure that they are scheduled in the *real-time market*. The Offer Price Test assesses “best effort” on the basis of the offer price of the transaction itself.

2.6.3 How the Offer Price Test Works

The Offer Price Test is a simple test that is performed on the first lamination of the *real-time market* import *offer*/or export *bid*. The “first lamination” is defined by the first two *price-quantity* (“p-q”) *pairs* in the *real-time market offer* curve, where:

² The price test for the Day-Ahead Linked Wheel Failure Charge (1134) is used to determine exemption from the RT-EFC-DALW and RT-IFC-DALW portions only.

³ Specifically, the Real-time Import Failure Charge (*charge type* 135), the Real-time Export Failure Charge (*charge type* 136), the Day-Ahead Import Failure Charge (*charge type* 1135), the Day-Ahead Export Failure Charge (*charge type* 1136) and the Day-Ahead Linked Wheel Failure Charge (*charge type* 1134).

- The first *price-quantity pair* contains an *offer* or *bid* price and a quantity of zero; and
- The second *price-quantity pair* contains the same *offer* or *bid* price as the first *price-quantity pair* and a non-zero quantity.

The Offer Price Test applies to any situation in which a day-ahead import or export transaction has a Reason Code, ‘AUTO’, ‘NY90’ ‘ADQh’, or ‘ORA’ assigned to the corresponding real-time import or export transaction at the same location. It is applicable to *any inertie metering point* where the underlying constrained scheduling point (CSP) is a “source” (i.e. applicable to imports only) or a “sink” (i.e. applicable to exports only).

If the transaction fails this test; it will not receive exemption status from the DA-IFC or DA-EFC. If the transaction passes this test, then it will be exempted from the DA-IFC or DA-EFC – without actually changing the Reason Code itself.

2.6.4 Input Data:

| | | |
|---------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DA_DQSI _{k,h} ^{i,t} | = | Day-ahead constrained quantity scheduled for injection by <i>market participant ‘k’</i> at <i>inertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> |
| PD_DQSI _{k,h} ^{i,t} | = | <i>Pre-dispatch</i> constrained quantity scheduled for injection by <i>market participant ‘k’</i> at <i>inertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . |
| PD_BE _{k,h} ^{i,t} | = | <i>Energy offers</i> submitted in Pre-dispatch, represented as an N by 2 matrix of <i>price-quantity pairs</i> for each <i>market participant ‘k’</i> at <i>inertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> arranged in ascending order by the offered price in each <i>price quantity pair</i> where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2 |
| - MMCP | = | The <i>Minimum Market Clearing Price</i> . |
| DA_DQSW _{k,h} ^{i,t} | | Day-ahead constrained quantity scheduled for withdrawal by <i>market participant ‘k’</i> at <i>inertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> |
| PD_DQSW _{k,h} ^{i,t} | | <i>Pre-dispatch</i> constrained quantity scheduled for withdrawal by <i>market participant ‘k’</i> at <i>inertie metering point ‘i’</i> during <i>metering interval ‘t’</i> of <i>settlement hour ‘h’</i> . |

$PD_BL_{k,h}^{i,t}$ *Energy bids* submitted in *pre-dispatch*, represented as an N by 2 matrix of *price-quantity pairs* for each *market participant* ‘k’ at *intertie metering point* ‘i’ during *metering interval* ‘t’ of *settlement hour* ‘h’ arranged in ascending order by the offered price in each *price quantity pair* where offered prices ‘P’ are in column 1 and offered quantities ‘Q’ are in column 2
 +MMCP = The *Maximum Market Clearing Price*.

2.6.5 Decision Logic Applied During the Offer Price Test for Import Transactions:

PART 1:

The first part of the test ensures that the original *schedule-of-record* schedule ($DA_DQSI_{k,h}^{i,t}$) for the import transaction is indeed GREATER THAN the resulting *Pre-dispatch schedule* ($PD_DQSI_{k,h}^{i,t}$) over the course of *settlement hour* ‘h’.

IF $\sum^T DA_DQSI_{k,h}^{i,t} > \sum^T PD_DQSI_{k,h}^{i,t}$

THEN

 Proceed to PART 2

ELSE

 END of the test for this transaction.

PART 2:

The second part of the test ensures that the first lamination (i.e. as defined by the first 2 *price-quantity pairs*) of the offer curve submitted into the *pre-dispatch scheduling process*:

- 1) Was large enough to cover the entire quantity of the transaction originally scheduled by the *schedule-of-record* at the same *market participant/intertie metering point* combination (commonly referred to as a “MP/MSP/CSP triplet”); and,
- 2) Was offered at the *Minimum Market Clearing Price* (-MMCP).

The test is as follows:

For each *metering interval* ‘t’ at *intertie metering point* ‘i’ where the transaction passed PART 1 for *settlement hour* ‘h’:

 Let ‘B’ be matrix $PD_BE_{k,h}^{i,t}$ (see above for definition).

IF $B[2,2] \geq DA_DQSI_{k,h}^{i,t}$ AND $B[2,1] = -MMCP$
 THEN
 Allow Reason Code to remain as-is, but exempt the transaction from the DA-IFC.
 ELSE
 Allow Reason Code to remain as-is, and do NOT exempt the transaction from the DA-IFC.

Implications:

- A day-ahead import transaction must be constrained down to a level lower than its original *schedule-of-record* schedule in order to receive exemption status;
- The entire amount of the constrained portion of the transaction must have been offered into the *Pre-dispatch* at $-MMCP$ in order to receive exemption status (compare Figures 2-1 and 2-2 to see examples where this condition is met and not met respectively); and
- Only the first lamination (i.e. the first 2 p-q pairs) of the *Pre-dispatch* offer curve for each import transaction are relevant in performing this test (due to the existing market rule requirement that offer prices must be monotonically increasing).

2.6.6 Decision Logic Applied During the Offer Price Test for Export Transactions:**PART 1:**

The first part of the test ensures that the original *schedule-of-record* ($DA_DQSW_{k,h}^{i,t}$) for the export transaction is indeed GREATER THAN the resulting *Pre-dispatch schedule* ($PD_DQSW_{k,h}^{i,t}$) over the course of *settlement hour 'h'*.

IF $\sum^T DA_DQSW_{k,h}^{i,t} > \sum^T PD_DQSW_{k,h}^{i,t}$

THEN

 Proceed to PART 2

ELSE

 END of the test for this transaction.

PART 2:

The second part of the test ensures that the first lamination (i.e. as defined by the first 2 *price-quantity pairs*) of the offer curve submitted into the *Pre-dispatch scheduling process*:

- 1) Was large enough to cover the entire quantity of the transaction originally scheduled by the *schedule-of-record* at the same *market participant/intertie metering point* combination (commonly referred to as a, "MP/MSP/CSP triplet"); and,
- 2) Was offered at the *Maximum Market Clearing Price (+MMCP)*.

The test is as follows:

For each *metering interval* 't' at *intertie metering point* 'i' where the transaction passed PART 1 for *settlement hour* 'h':

Let 'B' be matrix $BL_{k,h}^{i,t}$ (see above for definition).

IF $B[2,2] \geq DA_DQSW_{k,h}^{i,t}$ AND $B[2,1] = +MMCP$

THEN

Allow Reason Code to remain as-is, but exempt the transaction from the DA-EFC.

ELSE

Allow Reason Code to remain as-is, and do NOT exempt the transaction from the DA-EFC.

Implications:

- A day-ahead export transaction must be constrained down to a level lower than its original *schedule-of-record* in order to receive exemption status;
- The entire amount of the constrained portion of the transaction must have been offered into the *Pre-dispatch* at $+MMCP$ in order to receive exemption status (compare Figures 2-1 and 2-2 to see examples where this condition is met and not met respectively); and
- Only the first lamination (i.e. the first 2 p-q pairs) of the Pre-dispatch offer curve for each export transaction are relevant in performing this test (due to the existing *market rule* requirement that *offer* prices must be monotonically decreasing).

2.6.7 Decision Logic Applied During the Offer Price Test for Linked Wheel Transactions:

The test seeks to demonstrate a best efforts attempt to schedule both the import and export legs of a day-ahead linked wheel (DALW) transaction through both:

- A Pre-dispatch bid at positive maximum market clearing price ($+MMCP$) for a quantity at least equal to the day-ahead export quantity, and
- A Pre-dispatch offer at negative maximum market clearing price ($-MMCP$) for a quantity at least equal to the day-ahead import quantity.

For import leg of the linked wheel, the decision logic for the price test is described in Section 2.6.5 with the following amendment:

For each *metering interval* 't' at *intertie metering point* 'i' where the transaction passed PART 1 for *settlement hour* 'h':

Let 'B' be matrix $PD_BE_{k,h}^{i,t}$ (see above for definition).

IF $B[2,2] \geq DA_DQSI_{k,h}^{i,t}$ AND $B[2,1] = -MMCP$

THEN

Allow Reason Code to remain as-is, but exempt the transaction from the **RT-IFC-DALW**.
ELSE
Allow Reason Code to remain as-is, and do NOT exempt the transaction from the **RT-IFC-DALW**.

For export leg of the linked wheel, the decision logic for the price test is described in Section 2.6.6 with the following amendment:

For each *metering interval* 't' at *intertie metering point* 'i' where the transaction passed PART 1 for *settlement hour* 'h':

Let 'B' be matrix $BL_{k,h}^{i,t}$ (see above for definition).

IF $B[2,2] \geq DA_DQSW_{k,h}^{i,t}$ AND $B[2,1] = +MMCP$

THEN

Allow Reason Code to remain as-is, but exempt the transaction from the **RT-EFC-DALW**.

ELSE

Allow Reason Code to remain as-is, and do NOT exempt the transaction from the **RT-EFC-DALW**.

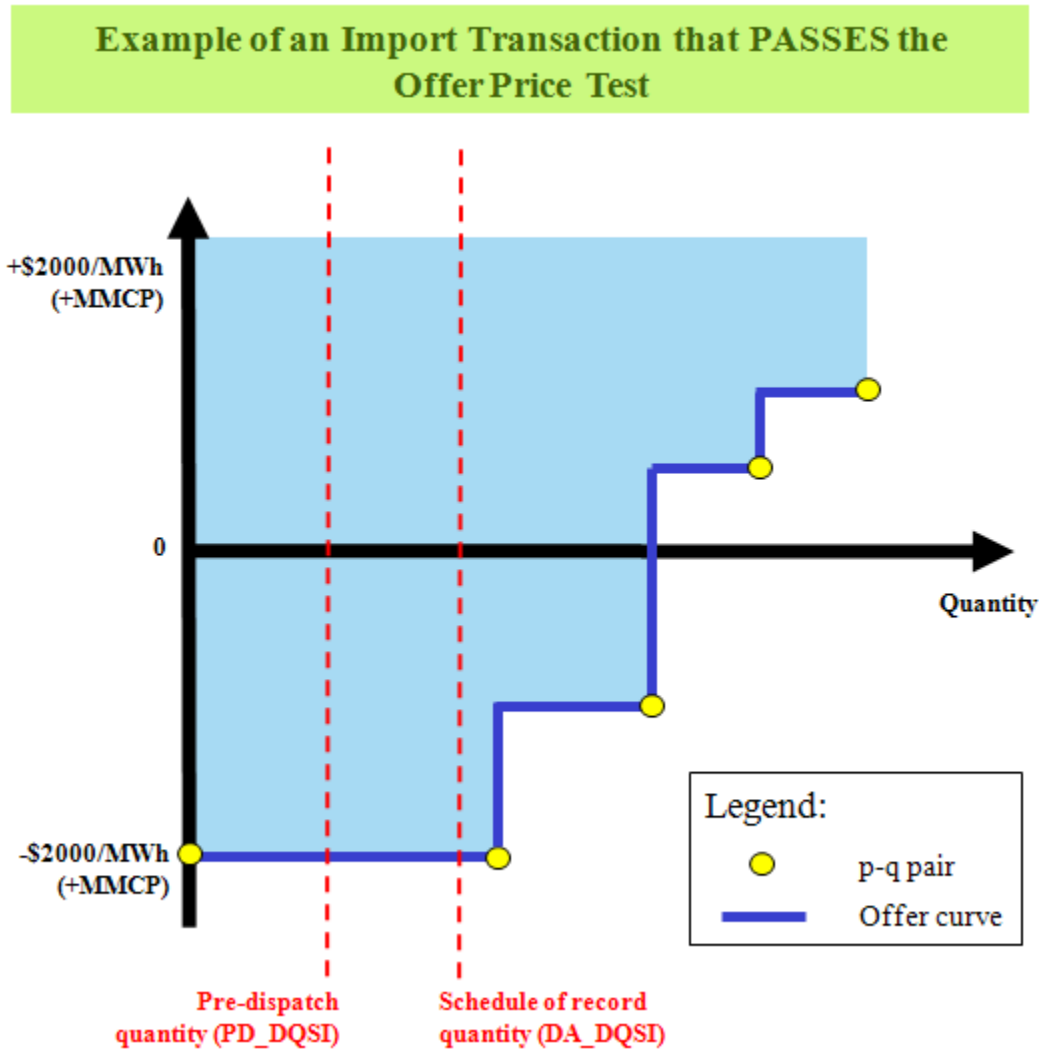


Figure 2-1 – Example of an Import Transaction that PASSES the “Offer Price Test”

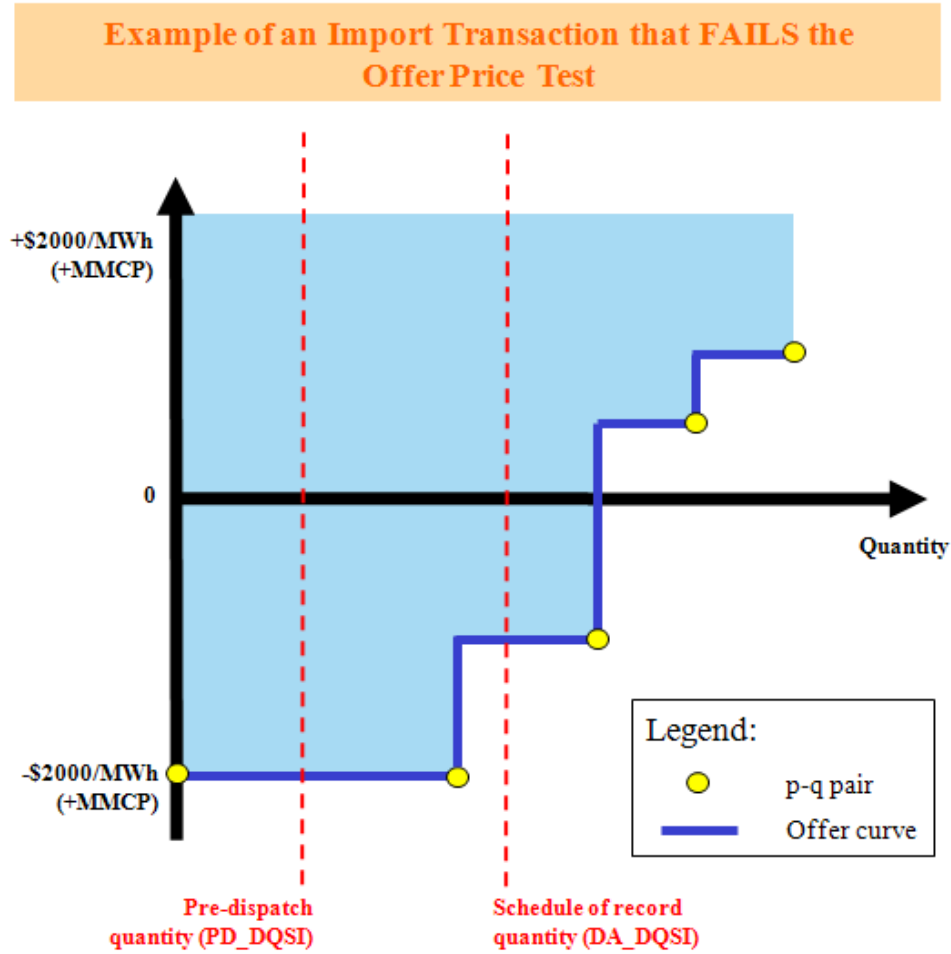


Figure 2-2 – Example of an Import Transaction that FAILS the “Offer Price Test”

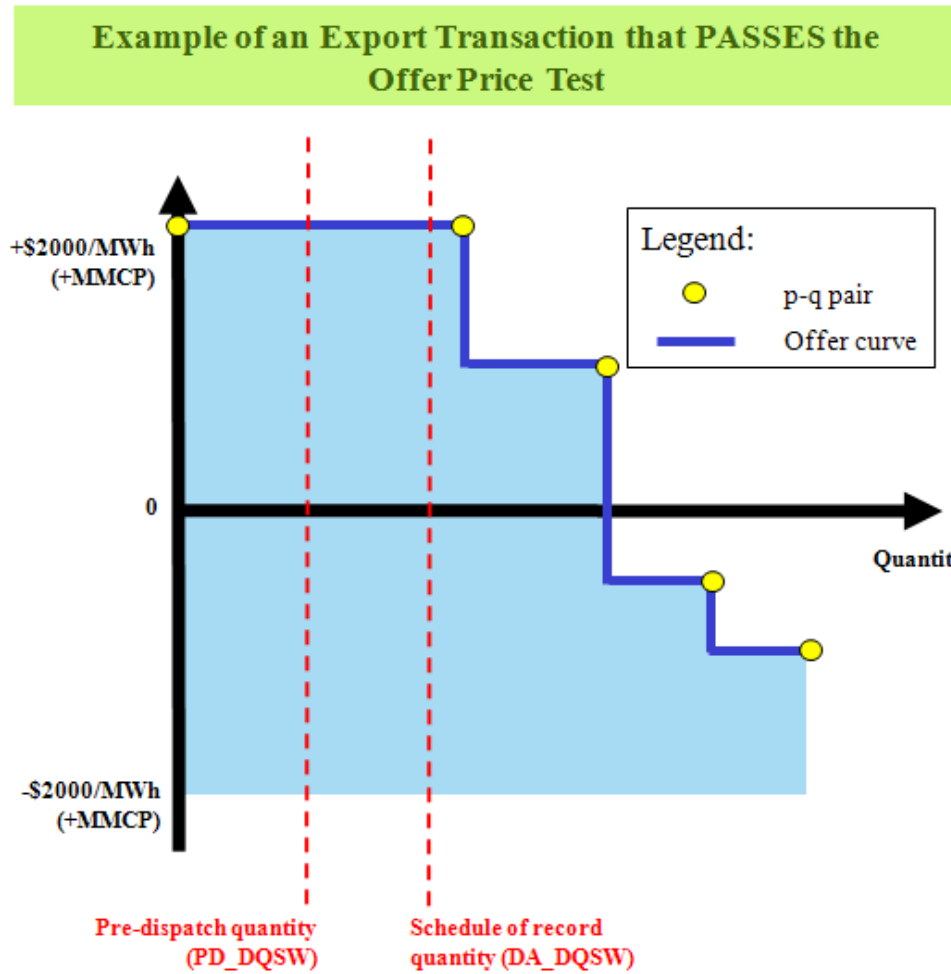


Figure 2-3 – Example of an Export Transaction that PASSES the “Offer Price Test”

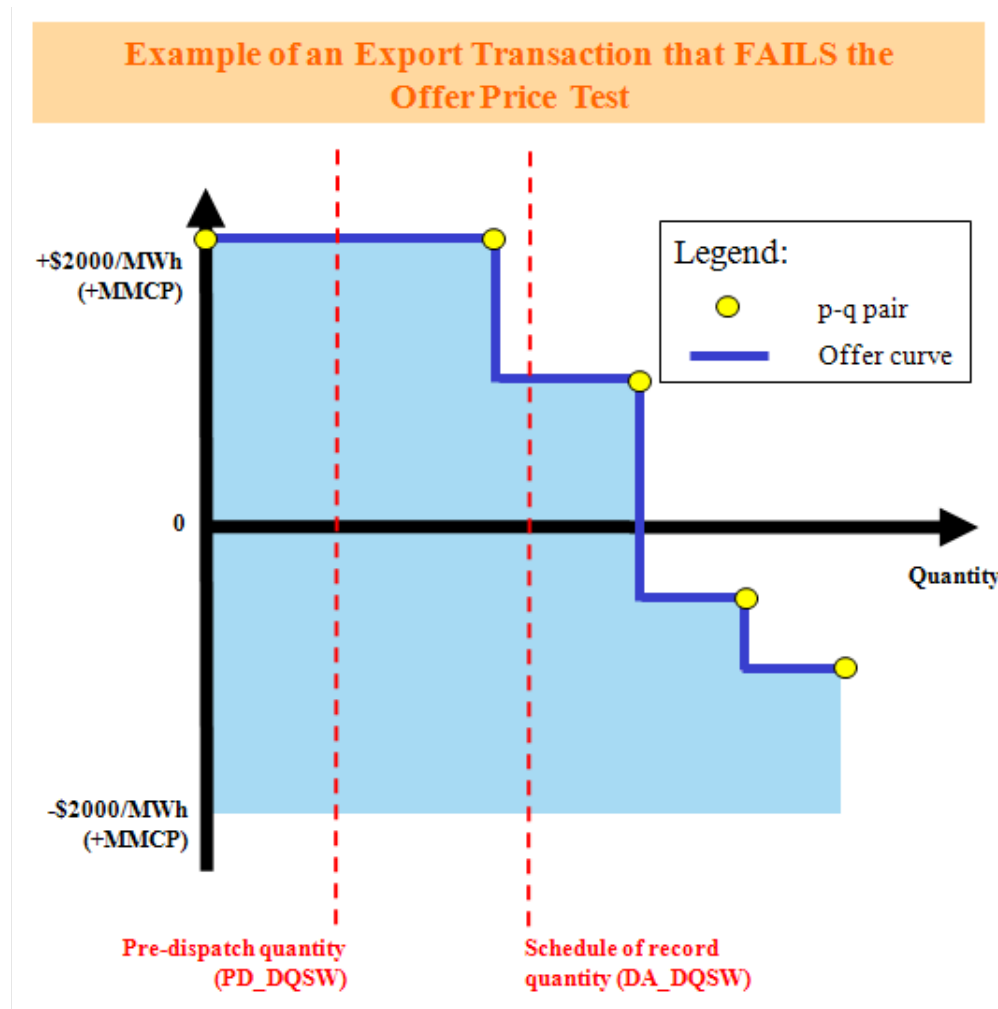


Figure 2-4 – Example of an Export Transaction that PASSES the “Offer Price Test”

- End of Section -

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