# MRP Implementation: Summary of Market Settlements, Metering, and Market Billing and Funds Administration

In order to facilitate the implementation of the market renewal program (MRP), changes are required to both *market rules* and *market manuals*. Due to the volume and complexity of changes anticipated in MRP, the *IESO* is releasing draft provisional changes in 'batches'. This document describes the provisional changes in the Market Settlements, Metering and Market Billing and Funds Administration batch.

# Market Settlements, Metering and Market Billing and Funds Administration Changes

### Changes to Market Rules

### **Chapter 6 – Wholesale Metering**

Amendments to Chapter 6 of the *market rules* are minor in nature, and include consequential edits to include references to the *day-ahead market*.

### Chapter 7 – Hydroelectric Resources – Facility Registration

Optional facility registration parameters for hydroelectric resources were introduced with the first batch of MRP *market rule amendments*. Changes to the parameters specified in MR Ch.7, s. 2.2.6A are specified in the summary of *market rule* changes table below.

### Chapter 8 – Physical Bilateral Contracts and Financial Markets

Amendments to Chapter 8 of the *market rules* include consequential amendments to *physical bilateral* contracts and the *transmission rights market* provisions required as a result of the introduction of a *dayahead market* 

### Chapter 9 and Chapter 9 Appendices – Settlements and Billing

Amendments to the body of Chapter 9 of the *market rules* are extensive, and include rewrites of section 3 – Hourly Settlement Amounts and section 4 – Non-Hourly Settlement Amounts. New Chapter 9 also includes new section 5 – Market Power Mitigation – Settlements which specifies the *settlement* mitigation process applicable to specific *settlement amounts* and adding new *settlement amounts* related to market power mitigation processes.

Amendments to section 1 – Introductory Rules, section 2 – Settlement Data Collection and Management, section 6 Settlement Statements are relatively minor in nature.

Amendments to the Chapter 9 Appendices include:

• Appendix 9.1 – VEE process – minor edits;



- Appendix 9.2 NEW Data Inputs and Variables: define the variable, subscripts and superscripts for the purposes of Chapter 9 and its Appendices;
- Appendix 9.3 NEW Pseudo Unit Translation: define the variables and specify the formulations for *pseudo-unit* translation;
- Appendix 9.4 NEW Settlement Mitigation: define the variables and methodology for settlements mitigation in the day-ahead market and real-time market.

### **Chapter 11 – Definitions**

A series of new definitions were added to Chapter 11 of the *market rules* to facilitate the new procedures related to Market Settlements, Metering and Market Billing and Funds Administration. Some existing definitions were modified to align with market design under the Market Renewal Program. Some existing definitions were deleted as they were associated with procedures that are being superseded by the new Market Settlements, Metering and Market Billing and Funds Administration procedures.

**Summary of Market Rule Changes: December 2022** 

Chapter	Section	Topic	Type of Change	Description
Chapter 6	1	Introduction	Modified	Section 1.2.1 - inserted "day-ahead market".
Chapter 6	2	Requirements for Metering Installations	Modified	Section 2.1.1 - inserted "day-ahead market".
Chapter 6	6	Registration of Metering Installations and Metering Registry	Modified	Sections 6.1.1 and 6.1.1A - inserted "day-ahead market".
Chapter 6	10	Processing of Metering Data for Settlement Purposes	Modified	<ul> <li>Modified the following:</li> <li>Section 10.3.1 - deleted 'subject to section 10.3.2';</li> <li>Section 10.3.2 - as a matter of clean-up, deleted this section which allows for metering data for legacy metering installations to be collated to 5 or 15 minute intervals. This section no longer applies as all legacy metering installations have been replaced.</li> </ul>
Chapter 6 Appendix 6.2	1.1A.1.5, 1.1A.1.4, 1.5.1.5	Alternative Metering Installation Standards	Modified	<ul> <li>Modified the following:</li> <li>Section 1.1A.1.4 - deleted 'subject to section 1.1A.1.5';</li> <li>Section 1.1A.1.5 and 1.5.1.5 - as a matter of cleanup, deleted this section which allows for metering data for legacy metering installations to be collated to 5 or 15 minute intervals. This section no longer applies as all legacy metering installations have been replaced.</li> </ul>
Chapter 7	2.2.6A	Hydroelectric Generation Resources –	Modified	Section 2.2.6A specifies optional resource-specific information that hydroelectric <i>generation resources</i> may submit during the <i>facility</i> registration process.

Chapter	Section	Торіс	Type of Change	Description
		Facility Registration	Change	An optional start indication value, shared daily energy limits, and time lag were introduced as part of the first batch of MRP market rule amendments.  The following changes are proposed:  • Section 2.2.6A.2: a start indication value – delete "MW values for each resource that is associated with a dispatchable hydroelectric generation resource" and replace with "start indication values not exceeding the number of generation units associated with the resource";  • Section 2.2.6A.4: shared daily energy limits – replace with the defined term "forebay";  • Section 2.2.6A.5 – time lag – insert "one or more time lags applicable to the resource's forebay".
Chapter 8	Throughout	General Changes Throughout Chapter 8	Modified	The following changes have been made throughout Chapter 8:  • Deleted all instances of "intentionally left blank – section deleted" for clean-up;  • renumbered section/subsections and updated cross-references accordingly;  • replaced acronym "RWM" with "registered wholesale meter";  Deleted acronym "TRs".
Chapter 8	1.1	Introductory Rules	Modified	Italicized "physical bilateral contract" and "market participant".
Chapter 8	2.1	Physical Bilateral Contract Data and Quantities	Modified	<ul> <li>Modified the following:</li> <li>Section 2.1.1 - deleted reference to "real-time markets" and left reference to "physical markets", which is inclusive of the real-time market and the day-ahead market;</li> <li>deleted "regulations" – defined term "applicable law" includes "regulations", and is thus redundant;</li> <li>New section 2.1.2 – moved provision from existing MR Ch. 9, s. 3.1.7 which specifies the IESO will offer a physical bilateral contract service to market participants to new section 2.1.2 – no changes made to the existing clause – relocation only;</li> <li>Section 2.1.3, 2.1.3.1:</li> <li>Inserted "in respect of the day-ahead market and/or the real-time market" in several instances to clarify applicability of physical bilateral contract data;</li> </ul>

Chapter	Section	Topic	Type of	Description
			Change	
				<ul> <li>Replaced "each hour" with the defined term "settlement hour";</li> <li>Section 2.1.3.2 – inserted "for the physical bilateral contract data submitted in respect of the real-time market" and "of the relevant trading day";</li> <li>Section 2.1.3.2a – replaced "hourly Ontario energy price" with "day-ahead market zonal price for energy"; made this section applicable to both buying market participant and selling market participant to reduce redundancy of language in existing section 2.1.2.2b;</li> <li>Section 2.1.3.2b and c – replaced "5-minute energy market price" with "applicable locational marginal price of energy in the real-time market"; replaced "facility" with "resource";</li> <li>2.1.3.4 – various minor wording changes</li> </ul>
Chapter 8	2.2	The Content of Physical Bilateral Contract Data	Modified	<ul> <li>2.1.3.4 – various, minor wording changes.</li> <li>Modified the following: <ul> <li>Inserted "Physical" in title heading;</li> <li>Section 2.2.1 - inserted "in respect of the dayahead market and/or the real-time market" in several instances to clarify applicability of physical bilateral contract data;</li> <li>Section 2.2.1.1 – added "is either" and "or a specified intertie metering point".</li> <li>Section 2.2.1.2 - inserted "in the context of physical bilateral contract data submitted in respect to the day-ahead market, does not relate to a non-dispatchable load".</li> </ul> </li> <li>Section 2.2.2 – italicized "hourly uplift"; added further procedural details for a selling market participant and cross reference to the "applicable market manual"; consequential deletion of section 2.2.3.</li> </ul>
Chapter 8	2.3	The Form of Physical Bilateral Contract Data	Modified	<ul> <li>Modified the following:</li> <li>Inserted "Physical" in title heading;</li> <li>Replaced "hour" with defined term "settlement hour" throughout';</li> <li>Section 2.3.1.1a – added clarity by adding "is a specified delivery point associated with" a registered wholesale meter;</li> <li>Section 2.3.2 – added additional detail for a selling market participant submitting physical bilateral contract data in respect of the real-time market, as well as the day-ahead market;</li> </ul>

Chapter	Section	Topic	Type of	Description
			Change	Section 2.3.3 - inserted "in respect of the <i>real-time</i>
				market and/or the day-ahead market".
Chapter 8	2.4	Submitting and Revising Physical Bilateral Contract Data	Modified	<ul> <li>Modified the following:</li> <li>replaced "dispatch day" with "trading day" throughout;</li> <li>Section 2.4.1.1 – inserted "and no later than six business days after that trading day" – six business day timeline taken from former section 2.4.11.3 and consolidated into 2.4.1.1;</li> <li>Section 2.4.1.2 – deleted unnecessary/redundant wording "on the same schedule and" and "for that dispatch day";</li> <li>Section 2.4.2.1, 2.4.2.4 – replaced "dispatch hour" with "settlement hour"; inserted "and specify whether it is in respect of the real-time market and/or the day-ahead market";</li> <li>Section 2.4.3 - provided clarification where physical bilateral contract data pertains to the same buying market participant at the same location and also added that it is "for the same physical market for</li> </ul>
Chapter 8	3, 3.1 to 3.3	The Transmission	No	energy".  No substantive changes.
Chapter 8	3.4	Rights Market Payments to TR Holders Under Transmission Rights	Modified	<ul> <li>Modified the following:</li> <li>Replaced "hour" with the defined term "settlement hour" throughout;</li> <li>Section 3.4.1 – inserted a cross reference to MR Ch. 9, s. 3.8.1 which specifies the calculation of the amount owing by the IESO in respect of a transmission right for each applicable TR holder. With the cross reference, the calculation methodology of previous sections 4.4.1.1 and 4.4.1.2 are redundant and no longer required;</li> <li>Section 3.4.2 – inserted "determined for the dayahead market" – the calculation in MR Ch.9, s. 3.8.1 uses the day-ahead market external congestion price for energy; simplified this section by deleting previous sections 4.4.2.1 and 4.4.2.2 and specifying that the amount owing by the IESO in the conditions specified in this section shall be "zero";</li> <li>Added new section 3.4.3 to address the scenario where the IESO suspends the day-ahead market.</li> </ul>

Chapter	Section	Topic	Type of Change	Description
Chapter 8	3.5	Allocation of Transmission Rights	No Change	No substantive changes.
Chapter 8	3.6	Simultaneous Feasibility	Modified	Added clarifying language to section 3.6.1 and inserted "as further described in the applicable market manual" – the market manual will provide further information on the simultaneous feasibility test.
Chapter 8	3.7	Determination of Transmission Transfer Capabilities	Modified	Section 3.7.1 – replaced "congestion rents" with "day-ahead market external congestion rent".
Chapter 8	3.8	Participation in TR Markets and Rules Applicable to TR Participants	No Change	No substantive changes.
Chapter 8	3.9	Assignment of Transmission Rights	No Change	No substantive changes.
Chapter 8	3.10	Short-Term Auctions	Modified	As a matter of clean-up, deleted section 3.10.3 which references the first short-term auction conducted by the IESO after the market commencement date.
Chapter 8	3.11	Long-Term Auctions	Modified	<ul> <li>Modified the following:</li> <li>Section 3.11.1, current section 4.11.7, section 3.11.6 - as a matter of clean-up, deleted references to the first/first three/fourth and subsequent long-term auction(s) (after the market commencement date);</li> <li>Section 4.11.9 – consequential clean-up/deletion with deletion of current section 4.11.7.</li> </ul>
Chapter 8	3.12	Pre-auction Publication	Modified	<ul> <li>Modified the following:</li> <li>Replaced "market commencement date" with "MRP commencement date" throughout;</li> <li>Section 3.12.1.1 – replaced the IESO requirement to publish "hourly prices determined on the basis of the last projected market price for energy for that hour" with "the DAM_PEChi and day-ahead market locational marginal price of energy" for each TR zone for "each settlement hour";</li> <li>Section 3.12.1.3 – replaced the IESO requirement to publish "actual and scheduled hourly flows" over each interconnection with "energy scheduled for injection or withdrawal in the day-ahead market";</li> </ul>

Chapter	Section	Topic	Type of Change	Description
				Section3.12.1.4 – updated to reflect that the hourly transmission transfer capability is used in the DAM calculation engine and deleted, "or from such earlier period as such information may be available provided that such information need not cover a period in excess of twelve months".
Chapter 8	3.13	TR Bids and TR Offers	No Change	No substantive changes.
Chapter 8	3.14	Bidding Limits	No Change	No substantive changes.
Chapter 8	3.15	TR Market Clearing Prices	No Change	No substantive changes.
Chapter 8	3.16	Post-Auction Notification and Publication	Modified	Italicized "business day".
Chapter 8	3.17	Payment for Purchase/Sale of Transmission Rights	No Change	No substantive changes.
Chapter 8	3.18	TR Clearing Account	Modified	Modified the following:  • Section 3.18.1.1 - replaced "net congestion rents" with "amount";  Amended cross-references throughout.
Chapter 8	3.19	Settlement	Modified	Modified the following:  • Section 3.19.2 – added detail on the funding of debits to the TR clearing account;  Section 3.19.3 – replaced "congestion rents" with "day-ahead market external congestion rent".
Chapter 8	3.20	Default in Payment	No Change	No substantive changes.
Chapter 9	Throughout	General Changes Throughout Chapter 9	Modified	<ul> <li>The following changes have been made throughout Chapter 9:</li> <li>As a matter of clean-up, deleted all instances of "intentionally left blank – section deleted";</li> <li>Renumbered section/subsections and updated cross-references accordingly;</li> <li>Replaced acronym "RWM" with "registered wholesale meter";</li> <li>Revised market rules section numbering convention – new convention will be uniform throughout the market rules and market manuals;</li> <li>Deleted the acronym "(TRs)".</li> </ul>
Chapter 9	Former 1.1	Application and Purpose	Deleted	Former sections 1.1 – The Application and Purpose, which summarizes the purpose of the chapter and

Chapter	Section	Торіс	Type of Change	Description
				lists examples of <i>settlement amounts</i> has been determined to be unnecessary and redundant, and has been deleted in its entirety.
Chapter 9	1.1	Regulated Settlement Amounts and Related Payment Charges	Modified	<ul> <li>Modified the following:</li> <li>Minor, stylistic wording changes. Deleted         "without limitations", "and any regulations         enacted thereunder, as amended from time to         time" – language is unnecessary;</li> </ul>
Chapter 9	2.1	Metering and Metering Responsibilities	Modified	<ul> <li>Modified the following:</li> <li>Minor, stylistic wording changes;</li> <li>Section 2.1.4: replaced "registered facility" with "resource";</li> <li>Section 2.15: replaced "operating agreements" with the defined term "interconnection agreements";</li> <li>Section 2.1.5.1: replaced "interchanges" with the defined term "interconnections";</li> <li>Section 2.1.5.3 – replaced cross reference to "section 3.1.9" with "section 9 of Appendix 9.2".</li> </ul>
Chapter 9	2.2	Station Service	Modified	<ul> <li>Modified the following:</li> <li>Minor, stylistic wording changes;</li> <li>Section 2.2.12.1 – replaced cross reference to "section 3.1.9" with "section 9 of Appendix 9.2";</li> <li>Section 2.2.15 and 2.2.16: replaced "registered facility" with "facility".</li> </ul>
Chapter 9	2.3	Metering Data Recording and Collection Frequency	Modified	<ul> <li>Modified the following:         <ul> <li>Section 2.3.2 – clarified and simplified section by inserting "metering data regarding demand or power (in MW) for";</li> <li>Replaced "self-scheduling generation facilities" with "non-dispatchable generation resources";</li> <li>Deleted references to "transitional scheduling generators or intermittent generators" – transitional scheduling generators no longer exist, intermittent generators included under non-dispatchable generation resources.</li> </ul> </li> </ul>
Chapter 9	2.4	Collection and Validation of Metering Data	Modified	Added section 2.4.6 (new) to specify the meaning of variables 'm', 'c' or 's' in respect of <i>market participant</i> 'k' for purposes of new Appendix 9.2.

Chapter	Section	Торіс	Type of Change	Description
Chapter 9	2.5	Delivery Points	Modified	<ul> <li>Modified the following:</li> <li>Minor, stylistic wording changes;</li> <li>Section 2.5.2 - specified that for purposes of determining settlement amounts referred to in sections 3, 4 and 5 of Chapter 9, all references to a registered wholesale meter are deemed to be a reference to the delivery point associated with a registered wholesale meter or registered wholesale meter(s) associated with the facility.</li> </ul>
Chapter 9	2.6	Collection of Interchange Schedule Data	Modified	Section 2.6.1.1 – replaced "transmission interface" with the defined term "intertie".
Chapter 9	2.7	Collection of Physical Bilateral Contract Data	Modified	<ul> <li>Modified the following:</li> <li>Section 2.7.1: added reference to "the day-ahead market and/or the real-time market";</li> <li>Replaced "hours" with the defined term "settlement hours";</li> <li>Section 2.7.3 – replaced "interval quantities" with the defined term "metering interval quantities";</li> <li>Section 2.6.3, 2.6.4 – replaced cross reference to section 3.1.6 to section 7 of Appendix 9.2.</li> </ul>
Chapter 9	2.8	Collection of Transmission Right (TR) Data	Modified	<ul> <li>Modified the following:</li> <li>Section 2.8.1: replaced "differences in energy prices between the specified injection TR zone and the specified withdrawal TR zone with which each TR is associated" with "the external congestion component of the day-ahead market intertie zone locational marginal price".</li> </ul>
Chapter 9	2.10	Collection of Market Price and Other Settlement Data	Modified	<ul> <li>Modified the following:</li> <li>Added "and its appendices" to the cross reference to Chapter 7 of the market rules;</li> <li>Added "and any other information" to the list of inputs as may be needed by the settlements process for determining settlement amounts pursuant to Chapter 9.</li> </ul>
Chapter 9	2.12	Settlement Variables and Data	New	This new section specifies that the IESO shall determine settlement amounts using the variables, data, mathematical functions and information described in accordance with Appendix 9.2 – Data Inputs and Variables, and shall provide this settlement data directly to the settlement process.
Chapter 9	2.13	Recovery of Ineligible	New	This new section specifies that if the <i>IESO</i> determines that any <i>settlement amount</i> was paid to a <i>market</i>

Chapter	Section	Topic	Type of	Description
			Change	
		Settlement Amounts		participant despite that market participant being ineligible to receive such settlement amount, the IESO may recover such payments and redistribute any recovered payments to market participants.
Chapter 9	2.14	Market Remediation		This new section specifies that if the IESO implements administrative prices in accordance with Chapter 7 of the market rules, that the IESO shall utilize the administrative prices during the settlement process. The section also provides further specifics if the IESO declares a day-ahead market failure or suspension.
Chapter 9	Existing Section 3	Determination of Hourly Settlement Amounts - All	Deleted	Existing section 3 – "Determination of Hourly Settlement Amounts" has been deleted in its entirety, and replaced with new section 3 - "Hourly Settlement Amounts"
Chapter 9	3, 3.1	Hourly Settlement Amounts: Two Settlement	New	This section specifies the two-settlement system to support the day-ahead market and the real-time market, including specifics on the calculation of day-ahead market settlement and real-time balancing settlement for:  Hourly physical transaction settlement amounts; Hourly virtual transaction settlement amounts; Hourly operating reserve settlement amounts.
Chapter 9	3.2	Hourly Physical Transaction Settlement Amount – Non- Dispatchable Resources	New	This section specifies the calculation of the hourly physical transaction settlement amount for non-dispatchable loads, non-dispatchable generation resources and self-scheduling electricity storage resources.
Chapter 9	3.3	DAM Balancing Credit	New	This section specifies the eligibility and calculations for the day-ahead market balancing credit settlement amount for GOG-eligible resources and boundary entity resources.
Chapter 9	3.4	Day-Ahead Market Make- Whole Payments	New	This section specifies the eligibility, exceptions, calculations and components for the day-ahead market make-whole payment for the following resource types: <ul> <li>Dispatchable generation resources not associated with a pseudo-unit;</li> <li>Dispatchable loads;</li> <li>Non-hourly demand response price responsive loads;</li> <li>Physical hourly demand response price responsive loads;</li> </ul>

Chapter	Section	Topic	Type of	Description
			Change	
				<ul> <li>Boundary entity resources – imports and exports;</li> <li>Hydroelectric generation resources; and</li> <li>Dispatchable generation resource associated with pseudo-unit.</li> </ul>
Chapter 9	3.5	Real-Time Make Whole Payments	New	This section specifies the eligibility, exceptions, calculations and components for the real-time market make-whole payment for the following resource types: <ul> <li>Dispatchable generation resources not associated with a pseudo-unit;</li> <li>Dispatchable loads;</li> <li>Boundary entity resources – imports and exports; and</li> <li>Dispatchable generation resource associated with pseudo-unit.</li> </ul>
Chapter 9	3.6	Real-Time Intertie Offer Guarantee	New	This section specifies the eligibility and calculations related to the real-time intertie offer guarantee settlement amount for energy import transactions for boundary entity resources.
Chapter 9	3.7	Real Time Intertie Failure Charge	New	This section specifies the eligibility and calculations related to the real-time import failure charge and the real-time export failure charge for <i>boundary entity resources</i> .
Chapter 9	3.8	Hourly Settlement Amounts for Transmission Rights	New	This section specifies the eligibility and calculations related to the TR settlement credit settlement amount.
Chapter 9	3.9	Operating Deviations (ORSSD)	Modified	Existing section 3.8 has been moved to section 3.9, with changes to the formulation.
Chapter 9	3.10	Hourly Uplifts	New	This section specifies the equation for the total hourly uplift to be recovered from market participants ("HUSA <sub>h</sub> "), and allocation methodology of such hourly uplift to all market participants on a pro-rata basis.
Chapter 9	4	Non-Hourly Settlement Amounts		<ul> <li>Existing section 4 of the market rules – Non-Hourly Settlement Amounts will include the following sections which will not substantively change:         <ul> <li>Section 4.1 – Transmission Tariff Changes – no change;</li> <li>Section 4.2 – Ancillary Service Payments – deletion of "intentionally left blank – section deleted" and consequential renumbering;</li> </ul> </li> </ul>

Chapter	Section	Topic	Type of	Description
			Change	
				<ul> <li>Section 4.3 – IESO Administration Charge, Penalties, and Fines – renumbered from existing section 4.5 to new section 4.3; no other changes;</li> <li>Section 4.9 – Transmission Rights Clearing Account Disbursements – renumbered from existing section 4.7 to new section 4.9; cross referencing updates, no substantive changes;</li> <li>Section 4.12 – Forecasting for Variable Generation – renumbered from existing section 4.7G to new section 4.12 – no other changes;</li> <li>Section 4.13 – Capacity Obligations – renumbered from existing section 4.7J to new section 4.13 – Note: This provision has been left blank and the updated MRP provisions will be provided in a future batch once anticipated market rule amendments related to capacity auctions is complete and the baseline is settled.</li> <li>The remainder of existing section 4 of the market rules will be deleted in their entirety, and replaced by sections 4.4 to 4.8, 4.10 to 4.11, and 4.14 as detailed below.</li> </ul>
Chapter 9	4.1	Transmission Tariff Charges	No Change	No change.
Chapter 9	4.2	Ancillary Service Payments	No Change	No substantive changes.
Chapter 9	4.3	IESO Administration Charge, Penalties, and Fines	No Change	No substantive changes.
Chapter 9	4.4	DAM Generator Offer Guarantee (DAM_GOG)	New	This section specifies the eligibility, calculations and variants for the day-ahead market generator offer guarantee settlement amount for the following GOG-eligible resources:  DAM GOG for non-pseudo units;  DAM GOG – combustion turbine associated with a pseudo-unit;  DAM GOG – steam turbine associated with a pseudo-unit.
Chapter 9	4.5	RT Generator Offer Guarantee	New	This section specifies the eligibility, calculations and variants for the real-time <i>generator offer</i> guarantee settlement amount for the following GOG-eligible resources:

Chapter	Section	Topic	Type of	Description
			Change	
				<ul> <li>Non-pseudo units;</li> <li>Combustion turbine associated with a pseudo-unit;</li> <li>Steam turbine associated with a pseudo-unit.</li> </ul>
Chapter 9	4.6	Real-Time Ramp Down Settlement Amount	New	This section specifies the eligibility and calculations for the real-time ramp-down settlement amount for the following GOG-eligible resources:  • GOG-eligible resources not associated with a pseudo-unit;  • GOG-eligible resources associated with a pseudo-unit – combustion turbine;  • GOG-eligible resources associated with a pseudo-unit – steam turbine.
Chapter 9	4.7	Internal Congestion and Loss Residuals	New	This section specifies the calculations for the internal congestion and loss residual settlement amount disbursed to or collected from market participants for non-dispatchable loads, dispatchable loads and price responsive loads.
Chapter 9	4.8	Real-Time External Congestion, Real- Time NISL Residual, and Day-Ahead Market NISL Residuals	New	This section specifies the calculations for the real-time external congestion residual settlement amount, real-time net interchange schedule limit (NISL) residual, day-ahead market NISL residual disbursed to or collected from the market participants for non-dispatchable loads, dispatchable loads, price responsive loads, and boundary entity resources engaging in export transactions.
Chapter 9	4.9	Transmission rights clearing account disbursements	No Change	This section has been renumbered from existing section 4.7 to new section 4.9; cross referencing updates, no substantive changes.
Chapter 9	4.10	Generator Failure charge	New	This section specifies the eligibility and calculations related to the <i>generator failure</i> charge – <i>market price</i> component <i>settlement amount</i> and the <i>generator failure</i> charge – guarantee cost component <i>settlement amount</i> of a <i>generator failure</i> , for <i>GOGeligible resources</i> for non- <i>pseudo-units</i> and <i>pseudo-units</i> .
Chapter 9	4.11	Fuel Cost Compensation Credit	New	This section specifies the conditions and principles for the calculation and disbursement of the fuel cost compensation credit settlement amount for GOG-eligible resources.
Chapter 9	4.12	Forecasting for Variable Generation	No Change	Renumbered from 4.7G. No change to the provision.
Chapter 9	4.13	Capacity Obligations	No Change	Renumbered from existing section 4.7J to new section 4.13 – no other changes.

Chapter	Section	Topic	Type of	Description
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				<b>Note:</b> This provision has been left blank and the updated MRP provisions will be provided in a future batch once anticipated <i>market rule amendments</i> related to <i>capacity auctions</i> is complete and the baseline is settled.
Chapter 9	4.14	Non-Hourly Uplifts	New	This section specifies the non-hourly uplifts calculated, collected or distributed (as applicable) from/to applicable market participants:  • Generator Failure Charge – Guarantee Cost Component Uplift;  • Real-Time Generator Offer Guarantee Uplift;  • Day-Ahead Market Uplift;  • Day-Ahead Market Reliability Scheduling Uplift;  • Fuel Cost Compensation Uplift;  • Mitigation Amount for Physical Withholding Uplift;  • Mitigation Amount for Intertie Economic Withholding Uplift;  • Real-Time Ramp-Down Settlement Amount Uplift;  • Additional Non-Hourly Uplifts.
Chapter 9	Existing Section 5	Market Power Mitigation	Deleted	Existing section 5 – Market Power Mitigation is obsolete, and has been deleted in its entirety. This charge type was in place between 2006 and 2009.
Chapter 9	5	Market Power Mitigation	New	This section specifies the market power mitigation process for the following settlement amounts:  • Day-ahead market make-whole payment settlement amount;  • Day-ahead market generator offer guarantee settlement amount;  • Real-time make-whole payment settlement amount;  • Real-time generator offer guarantee settlement amount;  • Ramp-down settlement amount.  It also specifies the following new settlement amounts related to the market power mitigation process:  • Mitigation Amount for Physical Withholding;  • Mitigation Amount for Intertie Economic Withholding;  • Day-Ahead Market Reference Level Settlement Charge;

Chapter	Section	Topic	Type of	Description
			Change	Real-Time Market Reference Level Settlement Charge.
Chapter 9	6	Settlement Statements		Note: The baseline market rules for section 6 – Settlement Statements include the proposed market rule amendments for the Replacement of the IESO Settlement System (RSS – MR-00472). Market Renewal related changes to section 6 are shown with tracked changes.
Chapter 9	6.1	Communication of Settlement Information	Modified	<ul> <li>Italicized 'process' as part of the defined term 'settlement process'.</li> <li>Removed "facsimile" as a communications method.</li> </ul>
Chapter 9	6.2	Settlement Schedule and Payments Calendar	No Change	No changes.
Chapter 9	6.3	Settlement Cycles	Modified	<ul> <li>Modified the following:</li> <li>Section 6.3.6 – replaced subsection numbering of a, b, c with section numbers and edited cross references accordingly;</li> <li>Sections 6.3.13 to 6.3.17 - Inserted references to the "day-ahead market"; replaced a-h subsection numbering with numerical references;</li> <li>Sections 6.3.20 to 6.3.23 – deleted "real-time market billing period" and for each TR market billing period" – additional language is unnecessary and simply references "billing period";</li> <li>Section 6.3.27 - deleted "energy market" – additional language is unnecessary and simply references "billing period".</li> </ul>
Chapter 9	6.4	Settlement Statement Process	Modified	Modified the following:  • Section 6.4.1 – streamlined cross-referencing;  • Section 6.4.6 - replaced instances of "re-send" or "re-sent" to "re-issue" or "re-issued".
Chapter 9	6.5	Preliminary Settlement Statement Coverage	Modified	<ul> <li>Modified the following:</li> <li>Section 6.5.1 - replaced "separate" preliminary statement with "individualized" preliminary statement;</li> <li>Sections 6.5.1.2 and 6.5.3 - inserted "day-ahead market" when referencing the "real-time market and in the TR market";</li> <li>Section 6.5.2.1 - replaced reference to the "hourly Ontario energy price" with "applicable market price";</li> </ul>

Chapter	Section	Topic	Type of	Description
Chapter	Section	Торіс	Change	Description
				<ul> <li>Sections 6.5.2.4 and 6.5.4.13 – replaced "type of charge" with defined term "charge type";</li> <li>Section 6.5.4 - replaced "registered facilities" with "resources"; inserted "day-ahead schedule" when referencing the "real-time schedule";</li> <li>section 6.5.4.3 – replaced "the market schedule and the real-time schedule" with the "day-ahead schedule and the real-time schedule";</li> <li>Section 6.5.4.8 – inserted "applicable" when referencing the "energy market price";</li> <li>Section 6.5.4.9 – replaced "5-minute price" with "market price" for each class of operating reserve;</li> <li>Sections 6.5.4.12 to 6.5.4.14 – replaced "payments" with "credits".</li> </ul>
Chapter 9	6.6	Final Settlement Statement Coverage	Modified	Modified the following:  • Section 6.6.1.2 - inserted "day-ahead market";  • Section 6.6.4 - replaced "outstanding disagreement" with "outstanding settlement disagreement".
Chapter 9	6.7	Recalculated Settlement Statement Coverage	Modified	Modified the following:  • Section 6.7.1.2 - inserted "day-ahead market";  • Section 6.7.4 - replaced "outstanding disagreement" with "outstanding settlement disagreement".
Chapter 9	6.8	Market Participant Validation of Settlement Statements		<ul> <li>Modified the following:</li> <li>Section 6.8.3 – replaced subsection numbering of a, b, c with section numbers and edited cross references accordingly;</li> <li>Section 6.8.4.2 – replaced "dispatch day" with "trading day";</li> <li>Section 6.8.12.4 – deleted cross-reference to Appendix 7.6 of Chapter 7 which has been deleted in its entirety;</li> <li>Section 6.8.12.8 – replaced references to the "5-minute energy market price" and "hourly Ontario energy price" and replaced with "market prices";</li> <li>Section 6.8.12.10 – new section adding matters subject to the independent review process set out in section 22.8 of Chapter 7 to the list of exclusions for a notice of disagreement.</li> </ul>
Chapter 9	6.9	IESO Validation of Settlement Statements	Modified	Modified the following:  • Section 6.9.1 – grammatical change: deleted "take one of the following steps";

Chapter	Section	Topic	Type of	Description
			Change	Section 6.9.2 – note: the effective date of RSS changes will be amended at a later time.
Chapter 9	6.10	Dispute Resolution	No Changes	No changes, other than section reference style changes.
Chapter 9	6.11	Responsibility of the IESO	Modified	• Section 6.11.2 - inserted "day-ahead market and".
Chapter 9	6.12	Settlement Invoices	Modified	<ul> <li>Modified the following:</li> <li>Section 6.12.2.2 – minor wording change - inserted "is held";</li> <li>Section 6.12.5 - replaced instances of "re-send" or "re-sent" to "re-issue" or "re-issued".</li> </ul>
Chapter 9	6.13	Payment of Invoices	Modified	Section 6.13.3 – italicized the word "services" within the term "transmission services charges".
Chapter 9	6.14, 6.15	Funds Transfer, Confirmation Notices	No Change	No substantive changes.
Chapter 9	6.16	Payment Default	Modified	<ul> <li>Modified the following:</li> <li>Section 6.16.5.1 - inserted "day-ahead market and";</li> <li>Section 6.16.6.2 - replaced "intervals" with the defined term "metering intervals";</li> <li>Sections 6.16.8 and 6.16.9 - deleted "real-time" before "market creditor" - wording unnecessary and not inclusive of the day-ahead market.</li> </ul>
Chapter 9	6.17	Payment Errors, Adjustments, and Interest	No Change	No substantive changes.
Chapter 9	6.18	Settlement Financial Balance/Maximu m Amount Payable by IESO	Modified	Modified the following:  • Section 6.18.1.1 – replaced "hourly market" with "day-ahead market and real-time market";  • Section 6.18.1.2 – inserted "daily and";  • Section 6.18.2 – inserted "day-ahead market";  • Section 6.18.3 – inserted "day-ahead market and real-time market" before "settlement amounts".
Chapter 9	6.19	Audit	No Changes	No changes.
Chapter 9	6.20	Settlement Accounts	No Changes	No substantive changes.
Chapter 9  - Appendix 9.1	1.1-1.7	VEE Process		<ul> <li>Modified the following:</li> <li>Deleted all instances of "intentionally left blank – section deleted" for clean-up;</li> <li>renumbered section/subsections and updated cross-references accordingly;</li> </ul>

Chanter	Section	Topic	Type of	Description
Chapter	Section	Торіс	Change	Description
				<ul> <li>replaced acronym "RWM" with "registered wholesale meter";</li> <li>revised market rules section numbering convention;</li> <li>Section 1.5.8 - replaced "generation facility," "load facility," and "electricity storage facility" with "generation resource," "load resource," and "electricity storage resource" respectively.</li> </ul>
Chapter 9  Appendix 9.2	1-10	Data Inputs and Variables	New	New Appendix 9.2 defines the variables, subscripts and superscripts for the purposes of Chapter 9 and Chapter 9 Appendices.  Appendix 9.2 also specifies the following data inputs which are provided directly to the settlement process:  Registration and General Variables, Data and Information;  Day-Ahead Market Variables, Data and Information;  Pre-Dispatch Variables, Data and Information;  Real-Time Market Variables, Data and Information;  Pre-Dispatch Variables, Data and Information;  Pre-Dispatch Variables, Data and Information;  Transmission Rights Variables, Data and Information;  Allocated Quantities;  Market Power Mitigation;  Lastly, Appendix 9.2 specifies the mathematical functions used in Chapter 9 and it's appendices.
Chapter 9  Appendix  9.3	1.1-1.6	Pseudo Unit Translation	New	New Appendix 9.3 defines the variables and specify the formulations for <i>pseudo-unit</i> translation, which are provided directly to the <i>settlement process</i> for the following:  • Day-Ahead Market – Energy;  • Day-Ahead Market – Operating Reserve;  • Pre-Dispatch – Energy;  • Pre-Dispatch – Operating Reserve;  • Real-Time Market – Energy;  • Real-Time Market – Operating Reserve.
Chapter 9  - Appendix 9.4	1-3	Settlement Mitigation	New	New Appendix 9.4 defines the variables and methodology for <i>settlements</i> mitigation in the <i>day-ahead market</i> and the <i>real-time market</i> by specifying:

Chapter	Section	Topic	Type of Change	Description
				<ul> <li>Constrained Area Conditions – determination of whether and which conduct tests will apply;</li> <li>Applicable Resources – determination of which resources are subject to any applicable conduct tests;</li> <li>Conduct Test – application of applicable conduct tests to applicable resources identified.</li> </ul>
Chapter 11	n/a	All	New, Modified , Deleted	Various – introduced new definitions and edited existing defined terms to support Market Settlements, Metering, and Market Billing and Funds Administration.

Summary of Changes to Market Manual 1.5 – Market Registration Procedures: December 1, 2022

Market Manual		5 – Market Registration Procedures: December 1, 2022  Description
Section		
2.2.1 Submission Requirements	Modification	Reinstated the erroneously deleted content regarding <i>Ontario Energy Board</i> license requirements.
3.3 Registration of Resources for Generators, Table 3-4	Modification	Added the new cascade group, forebay, and time lag sections to the table of resource data parameter requirements. These parameters replace the previous shared daily energy limit and time lag parameters.
3.3.1.3 Quick Start Flag	Modification	Updated content to reflect new defined terms for GOG-eligible resources.
3.3.2 Dispatchable Hydroelectric Generation Resource Registration Requirements	Editorial	Updated paragraph to be more concise.
3.3.2.2 Start Indication Value	Modification	Updated to clarify that <i>start indication value</i> parameter is submitted per <i>generation unit</i> and not per <i>resource</i> .
3.3.2.3 Hourly Must Run Flag	Editorial	Updated paragraph to be more concise.
3.3.2.4 Cascade Group and Forebay	Modification	Updated header from "Shared Daily Energy Limit" to "Cascade Group and Forebay".
		Updated section to reflect the change from registering a shared daily energy limit flag with resource IDs to two new identifiers called 'cascade group' and 'forebay'. These new parameters will enable shared maximum daily energy limit and minimum daily energy limit dispatch data.
3.3.2.5 Time lag	Modification	Updated <i>time lag</i> to apply to <i>forebays</i> instead of <i>resources</i> .  Updated to indicate the required <i>market participant time lag</i> submissions between adjacent <i>forebays</i> , and the <i>IESO</i> calculation for non-adjacent <i>forebays</i> .

Market Manual	Type of Change	Description
Section		
3.3.3.1 Elapsed Time to Dispatch	Modification	Updated content to reflect new defined terms for GOG-eligible resources.
3.3.5 Requirements for Generator Offer Guarantee Status	Modification	Updated content to reflect new defined terms for GOG-eligible resources.  Updated content to remove the market participant request to be GOG-eligible. All resources that have the required approved registration parameters will automatically be GOG-eligible resources.
3.6.1 Resource Compliance Aggregation	Modification	Updated the term <i>facility</i> to <i>resource</i> where appropriate to reflect the process.
List of Acronyms	Modification	Updated GOG to be 'Generator' instead of 'Generation' Offer Guarantee

## Summary of Changes to Market Manual 4.4: Transmission Rights Auction - December 1, 2022

This is an existing market manual that has been updated for MRP.

This *market manual* provides registered *Transmission Rights (TR) participants* with the information necessary for the:

- posting of a TR market deposit for the TR market; and
- submitting of TR bids in the TR market.

It also describes the operation of the *TR market*, the *TR auctions* and the *publication* of the results of the *TR auction* by the *IESO*. The procedures described in this *market manual* reflect the requirements set out in the *market rules* and applicable *IESO* policies and standards.

Market Manual Section	Type of Change	Description
1 Introduction	Editorial	Grammar and formatting changes are applied in this section and updated references to the appropriate settlements market manuals as the current settlements market manual references were restructured and contains updated titles and numbering
2 Transmissions Rights Overview	Modification	Updated content to reflect the future <i>Transmission Rights (TR) market</i> where TRs are used to hedge the <i>day-ahead market</i> external congestion costs that arise from binding import and export transmission limits at an <i>intertie zone</i> .  Added content to clarify that TRs cannot be used to hedge <i>intertie</i>
2.1	Modification	congestion prices in the real-time market nor any other component of intertie congestion prices in the day-ahead market.  Updated content to indicate that TR settlement will be now be resulting
TR Market		from the external congestion component of the <i>intertie congestion price</i> for a particular <i>intertie zone</i> in the <i>day-ahead market</i> .  Also, updated content to indicate that pre-auction reports will contain information pertaining to the <i>day-ahead market</i> .
		Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
2.2 Day-Ahead Market Input	Modification	Updated section heading to "Day-Ahead Market Input" from "Predispatch Input" and changed reference to congestion rents to day-ahead market external congestion rents to indicate TR settlement will only based on the external congestion component of the intertie congestion price.
		Day-ahead market external congestion rents is now a defined term.

Market	Type of Change	Description
Manual	,, ,	•
Section		
2.2.2 Determining Financial Upper Limit	Modification	Modified references to congestion rents to say day-ahead market external congestion rents.
2.3 TR Market Deposits for TR Auctions	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
2.4 TR Bid Data Requirements	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
3 Auctions of Short- Term and Long- Term TRs	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
3.1 Submission of TR Bids	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
3.2 Determination and Publication of TR Auction Results	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i> .
4 Settlement of Awards	Modification	Updated reference to Market Manual 5.7: Financial Markets Settlement Statements to Market Manual 5.8: Settlement Invoicing to reflect the new change of merging <i>market manual</i> 5.7 and 5.8 in to the new <i>market manual</i> 5.8: Settlement Invoicing.
4.1 Default in Payment	Modification	Updated all references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i>
4.2 Payments to TR Holders	Modification	Updated references to Market Manual 5.5 to Market Manual 5.11: Settlement Amounts Associated with the IESO-Administered Markets as market manual 5.5 will be obsolete and restructure to <i>market manual</i> 5.11.
		Updated content to indicate that TR <i>settlement</i> will be zero for cases where there is a <i>planned outage</i> or <i>forced outage</i> to an interconnection.

Market	Type of Change	Description
Manual Section		
4.2.1 Day-Ahead Market Failure	Addition	Added content describing the process following the determination of a day-ahead market failure or suspension along with adding in the relevant market rule reference.
Appendix B	Modification	Modified content to indicate titles of all relevant pre-auction reports and include the appropriate chapter 8 section 3 <i>market rule</i> references for additional details relating to the pre-auction reports.
Appendix C	Modification	Updated content to reflect the new method of calculating congestion rents collected by the <i>IESO</i> on the <i>interties</i> i.e. the amount collected by the <i>IESO</i> will now be a price difference resulting from external congestion between the <i>locational marginal price</i> and the <i>intertie border price</i> at a particular <i>intertie zone</i> in the <i>day-ahead market</i> .  Modified references to congestion rents to the defined term of <i>day-ahead external congestion rents</i> .
Appendix D, D.1 Determining Transmission Transfer Capability	Modification	Grammar and formatting changes are applied in this section.  Updated content to reflect that <i>intertie</i> scheduling will occur in the dayahead timeframe and not the pre-dispatch timeframe
Appendix E TR Auction Results	Modification	Updated content to only include reference to the two relevant <i>TR</i> auction result reports along with the relevant chapter 8 section 3 market rule reference.
		Removed all additional details so as to not reiterate what is already described in the indicated <i>market rule</i> chapter 8 section 3 reference.
Appendix F TR Market Deposits	Modification	Updated references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i>
Appendix G Summary of Transmission Rights	Modification	Updated content to indicate that TR <i>settlement</i> will now be based on the external congestion component of the <i>intertie congestion price</i> in the <i>day-ahead market</i> and TR <i>settlement</i> price will now be equal to the external congestion price at the <i>intertie</i> in the <i>day-ahead market</i> .  Added in references to chapter 8 section 3 of the <i>market rules</i> for details pertaining to TR payout process.
		Added in content and relevant chapter 8 section 3 market rule reference regarding the TR settlement process when there is a day-ahead market suspension.
Appendix H TRA Contingency Procedures	Modification	Updated references to chapter 8 section 4 of the <i>market rules</i> to chapter 8 section 3 to reflect the deletion of section 4 chapter 8 of the <i>market rules</i>

Market Manual Section	Type of Change	Description	
List of Acronyms Modification Add		<ul> <li>Added the following acronyms:</li> <li>DAM: Day-Ahead Market</li> <li>LMP: Locational Marginal Price</li> <li>TTC: Total Transfer Capability</li> </ul>	
		Removed Following acronyms:  • EMP: Energy Market Price  • ICP: Intertie Congestion Price	

### Market Manuals - Settlements

The following market manuals are part of the Settlements batch, released on December 1, 2022:

- Market Manual 1: Connecting to Ontario's Power System, Part 1.5: Market Registration Procedures
- Market Manual 4: Market Operations, Part 4.4: Transmission Rights Auction
- Market Manual 5: Settlements, Part 5.3: Physical Bilateral Contract Data
- Market Manual 5: Settlements, Part 5.5: IESO-Administered Markets Settlement Amounts

Future release(s) of Settlements batch related market manuals will include the following:

- Market Manual 5: Settlements, Part 5.6: Non-Market Settlement Programs
- Market Manual 5: Settlements, Part 5.7: Settlement Process (MRP updates to follow RSS publication)
- Market Manual 5: Settlements, Part 5.8: Settlement Invoicing (MRP updates to follow RSS publication)
- Market Manual 5: Settlements, Part 5.10: Settlement Disagreements (MRP updates to follow RSS publication)
- IESO Charge Types and Equations

The following *market manuals* will be deleted under MRP:

- Market Manual 4: Market Operations, Part 4.6: Real-Time Generation Cost Guarantee Program
- Market Manual 9: Day-Ahead Commitment Process, Part 9.5: Settlement of the Day-Ahead Commitment Process

### Market Manual 5.3: Physical Bilateral Contract Data

This is an existing *market manual* that has been restructured under MRP and renamed from "Submission of Physical Bilateral Contract Data" to "Physical Bilateral Contract Data".

The table that follows reflects this new structure. The *market manual* has been updated to reflect that *market participants* can submit *physical bilateral contract data* in either the *day-ahead market* and/or *real-time market*. The method by which a *selling market participant* may submit *physical bilateral contract data* to the *IESO*, revise or cancel *physical bilateral contract data*, and the prescribed timelines associated with any of these actions, has not changed under MRP.

### Note:

1. This *market manual* has been adapted to align to the new MRP document structure, and where applicable, any editorial and conforming changes due to MRP will be made and will not be explicitly identified in this table.

- 2. The detailed steps previously included to perform certain actions have been removed and replaced with reference to the applicable training guide.
- 3. The procedural work flows and procedural steps have been removed in the restructured *market manual* and relevant content has been moved within the body of the *market manual*, under the applicable sections.

### Details of changes to Market Manual 5.3: December 1, 2022

In the table that follows, "New" in the "Type of Change" column refers to the restructured *market manual* section being new. The content associated with that section is not new, unless stated otherwise in the "Description" column and has been updated due to MRP.

Market Manual Section	Type of Change	Description
Title	Modification	Title change from "Submission of Physical Bilateral Contract Data" to "Physical Bilateral Contract Data"
N/A	New	Restructured market manual that provides administrative and procedural details with respect to the settlement process by which the IESO shall determine the energy settlement of a physical bilateral contract between a selling market participant and a buying market participant, in either the day-ahead market and/or real-time market and reallocate components of hourly uplifts from the buying market participant to the selling market participant according to the physical bilateral contract data submission.
1 Introduction	New	This section contains:  1.1: Purpose of the market manual; 1.2: Scope of the market manual; 1.3: Overview of the market manual; and 1.4: Contact information for the IESO.
2 Content and Form of Physical Bilateral Contract Data	New	This section contains a description of the content and form of <i>physical bilateral contracts</i> .
2.1 Content of Physical Bilateral Contract Data	New	This section lists the content of the <i>physical bilateral contract data</i> that is to be submitted to the <i>IESO</i> by the <i>selling market participant</i> , for either the <i>day-ahead market</i> and/or <i>real-time market</i> .
2.2 Form of Physical Bilateral Contract Data Quantities	New	This section identifies the two forms that the <i>physical bilateral contract quantities</i> are to be submitted to the <i>IESO</i> by the <i>selling market participant:</i> absolute quantity of <i>energy</i> (in MWh) or derived quantity of <i>energy</i> .  Updated for MRP to state that the derived quantity of <i>energy</i> option is not available for <i>day-ahead market physical bilateral contracts</i> as the quantities of <i>energy</i> are derived from the <i>day-ahead schedule</i> .

Market Manual	Type of Change	Description
Section	Type of change	Description
3 Submission of Physical Bilateral Contract Data	New	This section identifies that <i>physical bilateral contract data</i> can be submitted to the <i>IESO</i> as either daily or standing.  Updated for MRP to state that <i>virtual zonal resources</i> are excluded from the list of resources that <i>market participants</i> without physical <i>facilities</i> can select from.
3.1 Submission Timelines for Daily Physical Bilateral Contract Data	New	This section provides the prescribed timelines for submitting daily physical bilateral contract data to the IESO by the selling market participant.
3.2 Submission Timelines for Standing Physical Bilateral Contract Data	New	This section provides the prescribed timelines for submitting standing physical bilateral contract data to the IESO by the selling market participant and the conversion to daily physical bilateral contract data.
4 Revisions to Physical Bilateral Contract Data	New	This section covers the procedures for submitting revisions to, including withdrawals of, <i>physical bilateral contract data</i> .
4.1 Revisions to Daily Physical Bilateral Contract Data	New	This section provides the procedures for submitting revisions to daily physical bilateral contract data.
4.2 Revisions to Standing Physical Bilateral Contract Data	New	This section provides the procedures for submitting revisions to standing <i>physical bilateral contract data</i> .
5 Settlement of Physical Bilateral Contract Data	New Modification	This section describes how the <i>settlement process</i> will <i>settle</i> the submitted <i>physical bilateral contract data</i> and allocate <i>hourly uplift</i> components.
6 Defaults and Suspensions	New	This section covers the impact of defaults and suspensions on <i>physical bilateral contracts</i> .

Market Manual Section	Type of Change	Description
Appendix A Forms	New	This section contains a list of forms that are used in this market manual.
List of Acronyms	New	This section contains a list of acronyms that are used in this market manual.
References	New	This section contains a list of <i>market manuals</i> and other <i>IESO</i> documents that are referenced in this <i>market manual</i> .

### Market Manual 5.5: Physical Market Programs

The implementation of MRP will affect existing *settlement amounts*. In these instances, those *settlement amounts* may be amended, replaced entirely, or will be retired under MRP. The new MRP *settlement amounts*, which will replace current *settlement amounts*, will take into account both *day-ahead market* and *real-time market* activity.

The following table takes the current *market manual* 5.5, at the time of this Settlements batch release, and summarizes the impact of MRP on these *settlement amounts*.

### Note:

- 1. All instances of "intentionally left blank" are not included in this table.
- 2. For those *settlement amounts* that will continue in some form in the future market, they have been adapted to align to the new MRP document structure, and where applicable, any editorial and conforming changes due to MRP will be made and will not be explicitly identified in this table
- 3. All *settlement amounts* that have been identified as "Moved to MM 5.6" will be moved to MM 5.6 which will be focused on regulatory settlement amounts and, as noted above, will be released as part of a subsequent batch.

Current Market Manual	Type of Change	Description
Section		
1.1	Modification	Updated for MRP
Purpose		
1.2	Modification	Updated for MRP
Scope		
1.6.1		
Generation Station Service		Moved to section 2.27 – Station Service Rebate
Rebate	Modification	Moved to section 2.28 – Station Service Rebate
1.6.1A		MRP updates: equation to include the new hourly
Electricity Storage Station		uplift and non-hourly uplift settlement amounts in day-
Service Rebate		ahead market and real-time market
1.6.5	Delete	Retired under MRP
Administrative Pricing Event		

Current	Type of Change	Description
Market Manual		
Section		
		<ul> <li>Request for additional compensation not required with the introduction of the real-time make-whole payment</li> </ul>
1.6.6 Transmission Service Charges for Embedded Generation	Relocate	Moved to MM 5.6
1.6.7 Regulated Price Plan, Regulated Generation	Relocate	Moved to MM 5.6
1.6.8 Limiting CMSC Payments for Exporters and Dispatchable Loads and Electricity Storage Participants	Delete	<ul> <li>Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment</li> <li>Replacement bids for dispatchable load, electricity storage resources, and exports have been retained and included in the calculation of make-whole payments for day-ahead market and real-time market</li> </ul>
1.6.9 Adjustment for Facility- Induced CMSC	Delete	<ul> <li>Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment</li> <li>Business rules and definitions for energy and operating reserve for dispatchable loads have been retained and applied to the calculation of lost opportunity cost for real-time make-whole payments</li> </ul>
1.6.10 Real-time Import Failure Charges and Export Failure Charges	Modification	<ul> <li>Moved to section 2.22</li> <li>MRP updates:         <ul> <li>new market price for energy</li> <li>schedules subject to the failure charge</li> <li>when a failure charge will be applied</li> </ul> </li> <li>Intertie transaction reason codes moved to MM 4.3:         <ul> <li>Real-Time Scheduling of the Physical Markets</li> </ul> </li> </ul>
1.6.11 Standard Offer Program (SOP)	Relocate	Moved to MM 5.6
1.6.12 CMSC Adjustment for Replacement Offer Events	Delete	Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment
1.6.13 Compensation Resulting from an SPS Activation	Delete	Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment

Current	Type of Change	Description
Market Manual	71	
Section		
1.6.14 Northern Industrial Electricity Rate Program (NIERP)	Relocate	Moved to MM 5.6
1.6.17 Conservation Assessment Recovery	Relocate	Moved to MM 5.6
1.6.19 Renewable Integration – Forecasting	Modifications	<ul> <li>Moved to section 3.1 – Forecasting Services</li> <li>Moved to section 3.2 – Forecasting Service Uplift</li> </ul>
1.6.20 Adjustment for Self-Induced CMSC Earned by Certain Generating Facilities	Delete	Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment
1.6.22 Limiting Payments to Exports during Negative Prices	Delete	Retired under MRP with the introduction of the real- time make-whole payment
1.6.23 Smart Metering Entity Charge	Relocate	Moved to MM 5.6
1.6.25 Biomass NUG and Energy from Waste (EFW) Contracts	Relocate	Moved to MM 5.6
1.6.26 Capacity Obligations	Relocate	<ul> <li>Moved to section 3.4 – Capacity Obligations</li> <li>Changes to be provided following the finalization of the Capacity Auction Market Rule Amendment</li> </ul>
1.6.27 Transmission Rights Clearing Account Disbursement	Modification	<ul> <li>Moved to section 2.22.1 – Transmission Rights         Clearing Account Disbursement</li> <li>Example deleted</li> <li>Illustration included of "TRCA balance period" and         "TRCA look-back period"</li> </ul>
1.6.28 Limiting Constrained-off CMSC at Interties	Delete	Retired under MRP with the introduction of a single schedule market and the real-time make-whole payment
1.6.29 Ontario Electricity Support Program	Relocate	Moved to MM 5.6
1.6.30 Adjustment Account Surplus Disbursement	No Change	Moved to section 3.3 – Adjustment Account Surplus Disbursement
1.6.31 Limiting Constrained On CMSC Payments to Generators and	Modification	Moved to section 2.23 – Real-Time Ramp-Down Settlement Amount

Current	Type of Change	Description
Market Manual		
Section		
Electricity Storage Participants Ramping Down		<ul> <li>Moved to 2.24 – Real-Time Ramp-Down Settlement Amount Uplift</li> <li>New settlement amount calculation updated for MRP to reflect:         <ul> <li>new market price for energy and impact of day- ahead market</li> <li>removal of CMSC under a single schedule market</li> </ul> </li> </ul>
1.6.32 Ontario Rebate for Electricity Consumers Act, 2016	Relocate	Moved to MM 5.6
1.6.33	Relocate	Moved to MM 5.6
Fair Hydro Act, 2017		
1.6.34 Capacity Exports	Modification	<ul> <li>Content removed from MM 5.5 and included in the following sections of MR Ch.9:</li> <li>Section 3.4 - Day-Ahead Market Make-Whole Payment</li> <li>Section 3.5 - Real-Time Make-Whole Payment</li> <li>Section 4.4 - Day-Ahead Market Generator Offer Guarantee</li> <li>Section 4.5 - Real-Time Generator Offer Guarantee</li> </ul>
1.6.35 Dispute Resolution Settlement	No Change	Moved to section 3.5 – Dispute Resolution Settlement
1.6.36 COVID-19 Energy Assistance Program (CEAP and CEAP-SB)	Relocate	Moved to MM 5.6
1.7 Roles and Responsibilities	Delete	Not required under new MRP document template
1.8 Contact Information	Modification	<ul> <li>Moved to section 1.4</li> <li>Updated to new MRP document template</li> </ul>
Appendix A Forms	Relocate	IMO_FORM_1507 Declaration of Designated Consumers - moved to MM 5.6
	Delete	IMO_FORM_1549 Administrative Pricing Event Correction
Appendix B IESO Charge Types Applicable to the Authorized Charge	Relocate	Moved to MM 5.6
Appendix C	No Change	No change
· ·	<u> </u>	1 2

Current	Type of Change	Description
Market Manual		
Section		
Price Bias Adjustment Factors		
Calculation Method for the		
Real-Time Import and Export		
Failure Charge		
Appendix D	To be reviewed in	future alignment of market manuals
Expired Settlement		
Calculations Kept for Purposes		
of Re-Calculation		
Appendix E	To be reviewed in	future alignment of market manuals
OPG Rebate		

### Market Manual 5.5: IESO-Administered Markets Settlement Amounts

This is an existing *market manual* that has been restructured under MRP and renamed from "Physical Market Programs" to "IESO-Administered Markets Settlement Amounts". The table that follows reflects this new structure.

This market manual describes the settlement process by which the IESO shall determine settlement amounts associated with the IESO-administered markets, including a breakdown of each hourly and non-hourly settlement amount by charge type that will appear on a market participant's settlement statement and invoice.

For settlement amounts not associated with the IESO-administered markets, which include, but are not limited to those as directed by applicable law, will be included in MM 5.6: Non-Market Settlement Programs. This market manual will be provided for stakeholder review and comment at a future release of market manuals for the Settlements batch.

The *physical market* will now include a *day-ahead market* for *energy* transactions and *operating reserve* transactions. Additionally, MRP has introduced virtual transactions for *energy*, that, although part of the financial market, will be *settled* under the *physical market*. Both are included in this *market manual*.

### Detail of changes to Market Manual 5.5: December 1, 2022

Market Manual Section	Type of Change	Description
Title	Modification	Title change from "Physical Market Programs" to "IESO-Administered Markets Settlement Amounts".
N/A	New	Restructured market manual that describes the settlement process by which the IESO shall determine settlement amounts associated with the IESO-administered markets, including a breakdown of each hourly and non-hourly settlement amount by charge type that will appear on a market participant's settlement statement and invoice.
1 Introduction	New	This section contains:  1.1: Purpose of the market manual;  1.2: Scope of the market manual;  1.3: Overview of the market manual;

Market Manual Section	Type of Change	Description
		1.4: Contact information for the IESO.
2 Day-Ahead Market and Real-Time Market Settlement Charges, Credits and Uplifts	New	This section contains a description of:  • day-ahead market settlement charges, credits and uplifts and the associated charge types; and  • real-time market settlement charges, credits and uplifts and the associated charge types.
2.1 Two-Settlement System	New	The settlement of the day-ahead market and real-time market for energy and operating reserve will be accomplished through the two-settlement system for dispatchable resources.
2.2 Non-Dispatchable Resource Settlement	New	Settlement of energy for non-dispatchable resources will be based on the actual quantity of energy withdrawn or injected in the real-time market.  For non-dispatchable loads, the settlement of energy will be based on the Ontario zonal price adjusted by the load forecast deviation charge, and the actual quantity of energy withdrawn at the delivery point in real-time.
2.3 Day-Ahead Market Make-Whole Payment (DAM_MWP)	New	The day-ahead market make-whole payment settlement amount (DAM_MWP) provides compensation to dispatchable generation resources, dispatchable loads, price responsive loads, and boundary entity resources that receive a day-ahead schedule for energy or operating reserve that deviates from their economic operating point.
2.4 Day-Ahead Market Generator Offer Guarantee (DAM_GOG)	New	The day-ahead market generator offer guarantee settlement amount (DAM_GOG) provides compensation to market participants with GOG-eligible resources that have a day-ahead operational commitment and are unable to recover their as-offered costs based on the revenue earned during the day-ahead commitment period for energy and operating reserve.  The DAM_GOG replaces the day-ahead production cost guarantee (DA_PCG).
2.5 Day-Ahead Market Uplift (DAM_UPL)	New	The day-ahead market uplift settlement amount (DAM_UPL) will recover the cost of the DAM_MWP and DAM_GOG settlement amounts. The calculation of the DAMU will exclude the portion of the DAM_MWP and DAM_GOG settlement amounts that are settled under the day-ahead market reliability scheduling uplift (DRSU).

Market Manual	Type of Change	Description
2.6 Day-Ahead Market Reliability Scheduling Uplift (DRSU)	New	During Pass 2: Reliability Scheduling and Commitment of the day-ahead market calculation engine, the following additional resources may be committed:  • GOG-eligible resources; or  • newly scheduled or incrementally scheduled import transactions for boundary entity resources.  When this occurs, the IESO will need to recover any additional cost associated with scheduling these resources. These additional costs will be recovered through the day-ahead market reliability scheduling uplift settlement amount (DRSU).
2.7 Real-Time Make- Whole Payment (RT_MWP)	New	The real-time make-whole payment settlement amount (RT_MWP) provides compensation to dispatchable generation resources, dispatchable loads, and boundary entity resources that receive a real-time schedule for energy or operating reserve that deviates from their economic operating point when following IESO dispatch instructions.
2.8 Real-Time Make- Whole Payment Uplift (RT_MWPU)	New	The real-time make-whole payment uplift settlement amount (RT_MWPU) will recover the cost of the RT_MWP settlement amounts.
2.9 Day-Ahead Market Balancing Credit (DAM_BC)	New	The IESO will calculate the day-ahead market balancing credit settlement amount (DAM_BC) for market participants with eligible GOG-eligible resources and boundary entity resources to compensate for financial losses incurred by the market participant in the circumstances specified in the market rules.
2.10 Day-Ahead Market Balancing Credit Uplift (DAM_BCU)	New	The day-ahead market balancing credit uplift settlement amount (DAM_BCU) will recover the cost of the DAM_BC settlement amounts.
2.11 Real-Time Generator Offer Guarantee (RT_GOG)	New	The real-time <i>generator offer</i> guarantee <i>settlement amount</i> (RT_GOG) provides compensation to <i>market participants</i> with <i>GOG-eligible resources</i> that are committed during the <i>pre-dispatch scheduling process</i> and are unable to recover their as-offered costs based on the revenue earned during the <i>pre-dispatch commitment period</i> .  The RT_GOG replaces the real-time generator cost guarantee (RT_GCG).
2.12 Real-Time Generator Offer Guarantee Uplift (RT_GOGU)	New	The real-time <i>generator offer</i> guarantee uplift <i>settlement amount</i> (RT_GOGU) will recover the cost of the RT_GOG <i>settlement amounts</i> . The RT_GOGU replaces the real-time generator cost guarantee (RT_GCG).

Market Manual	Type of Change	Description
Section	Type of Change	Description
2.13 Generator Failure Charge (GFC)	New	A GOG-eligible resource that is committed by the pre-dispatch calculation engine and fails to deliver energy into the real-time market, will incur a generator failure charge (GFC).  There are two components to the GFC: market price component
		(GFC_MPC) and guarantee cost component (GFC_GCC).
2.14 Generator Failure Charge – Market Price Component Uplift (GFC_MPCU)	New	The generator failure charge – market price component uplift settlement amount (GFC_MPCU) will recover the cost of the GFC_MPC settlement amounts.
2.15 Generator Failure Charge – Guarantee Cost Component (GFC_GCCU)	New	The generator failure charge – guarantee cost component uplift settlement amount (GFC_GCCU) will recover the cost of the GFC_GCC settlement amounts.
2.16 Real-Time Intertie Failure Charge (RT_INFC)	New	The real-time import failure charge <i>settlement amount</i> (RT_IMFC) and real-time export failure charge <i>settlement amount</i> (RT_EXFC) are existing <i>settlement amounts</i> that have been updated under MRP to reflect the schedules that are subject to the failure charge and the new <i>market price</i> for <i>energy</i> used in the <i>settlement</i> calculation.
2.17 Real-Time Intertie Failure Charge Uplift (RT_IFCU)	New	This is an existing settlement amount that will recover the real-time import failure charge settlement amount (RT_IMFC) and real-time export failure charge settlement amount (RT_EXFC).  The settlement amount has been renamed from Intertie Failure Charge Rebate.
2.18 Real-Time Intertie Offer Guarantee (RT_IOG)	New	The real-time <i>intertie offer</i> guarantee <i>settlement amount</i> (RT_IOG) is an existing <i>settlement amount</i> that has been updated under MRP to reflect the new IOG offset process.
2.19 Real-Time Intertie Offer Guarantee Uplift (RT_IOGU)	New	The real-time intertie offer guarantee uplift settlement amount (RT_IOGU) will recover the cost of the RT_IOG settlement amounts.
2.20 Internal Congestion and Loss Residuals (ICLR)	New	Locational pricing and the physical realities of the <i>IESO-controlled grid</i> mean the amount paid for <i>energy</i> by consumers does not always equal the amount paid to suppliers. This differential is known as residuals. The internal congestion and loss residual <i>settlement amount</i> (ICLR) will be disbursed to or collected from <i>load resources</i> at each <i>delivery point</i> .

Market Manual	Type of Change	Description
Section	Type of Change	Description
2.21 External Congestion and NISL Residuals	New	Residuals are created at the <i>interties</i> in the <i>day-ahead market</i> and <i>real-time market</i> as part of the <i>energy settlement</i> from all <i>boundary entity resources</i> that consume or supply <i>energy</i> .
		Four types of residuals can arise at the <i>interties</i> : (1) <i>day-ahead market</i> external congestion residual, (2) <i>real-time market</i> external congestion residual, (3) <i>day-ahead market</i> net interchange scheduling limit residual, and (4) <i>real-time market</i> net interchange scheduling limit residual.
		Each, with the exception of the day-ahead market external congestion residual which will be allocated to the TR clearing account, will be disbursed to or collected from the market.
2.22 Transmission Rights	New	With the introduction of <i>location marginal prices</i> and a <i>day-ahead market</i> , the <i>TR market settlement</i> has shifted from real-time to day-ahead. After payments are made to <i>TR holders</i> , the net <i>day-ahead market</i> external congestion residual (DAM_NECR) will be allocated to the that is collected in the <i>day-ahead market</i> , net of payments made to <i>TR holders</i> will be allocated to the <i>TR clearing account</i> for future disbursement.
2.23 Real-Time Ramp- Down Settlement Amount (RT_RDSA)	New	The real-time ramp-down settlement amount (RT_RDSA) is intended to compensate GOG-eligible resources for ramp-down costs and will be calculated for settlement hours where the GOG-eligible resource's real-time schedule is less than its minimum loading point, indicating the GOG-eligible resource's intent to de-synchronize from the IESO-controlled grid.  The RT_RDSA replaces charge type 122 – Ramp Down Settlement Amount.
2.24 Real-Time Ramp- Down Settlement Amount Uplift (RT_RDSAU)	New	The real-time ramp-down uplift settlement amount (RT_RDSAU) will recover the cost of the RT_RDSA.
2.25 Fuel Cost Compensation Credit (FCC)	New	The IESO will compensate market participants for the cost incurred in securing unused fuel as a result of specified de-commitment events. The fuel cost compensation credit (FCC) is intended to allow GOG-eligible resources to recover the cost of fuel incurred to meet the day-ahead operational commitment or pre-dispatch operational commitment that it may not otherwise be able to recover from the IESO-administered markets. The FCC is only applicable to the

Market Manual Section	Type of Change	Description
		procurement of fuel required to achieve <i>minimum loading point</i> of the relevant operational commitment.
		This is an existing settlement amount that has been updated for MRP.
2.26 Fuel Cost Compensation Credit Uplift (FCCU)	New	The fuel cost compensation credit uplift settlement amount (FCCU) will recover the cost of the fuel cost compensation credit.
		This is an existing settlement amount that has been updated for MRP.
2.27 Station Service Rebate	New	Some facilities in the IESO-administered markets consume energy as station service. Metered market participants for certain facilities are eligible for reimbursement of the hourly uplift and non-hourly uplift settlement amounts related to AQEW consumed as station service.
		This is an existing settlement amount that has been updated for MRP to reflect the new hourly uplift and non-hourly uplift settlement amounts.
2.28 Station Service Debit	New	The station service debit settlement amount will recover the cost of the station service rebate.
		This is an existing settlement amount.
3 Other Market Charges, Credits and Uplifts	New	This section contains a description of other hourly and non-hourly market charges, credits and uplifts and the associated <i>charge types</i> .
3.1 Forecasting Services	New	The IESO has established forecasting services as a procured service to accommodate variable generation from wind and solar resources. The forecasting service settlement amount will be paid to forecasting service providers.
		This is an existing settlement amount. No updates required due to MRP.
3.2 Forecasting Services Uplift	New	The forecasting service balancing amount settlement amount will recover the cost of paid to forecasting service providers.
		This is an existing settlement amount. No updates required due to MRP.
3.3 Adjustment Account Surplus Disbursement	New	The IESO will review, at least annually, the allocation of any credit balance to the IESO adjustment account as directed by the IESO Board. The IESO Board may direct that some or all of the credit balance (surplus) be distributed to market participants as a rebate.
		This is an existing settlement amount. No updates required due to MRP.

Market Manual Section	Type of Change	Description
3.4 Capacity Obligations	New	To be provided following the finalization of the Capacity Auction Market Rule Amendment.
3.5 Dispute Resolution Settlement	New	After the successful resolution of a dispute between the IESO and a market participant, the IESO will determine a settlement amount to be paid to or owed by the market participant.  This is an existing settlement amount. No updates required due to MRP.
4 Market Power Mitigation	New	This section describes the impacts to the <i>settlement process</i> when the <i>IESO</i> implements the market power mitigation process to assess the exercise of global market power and local market power.
5 Market Remediation	New	This section describes the impacts to the <i>settlement process</i> when potential market tool failures and errors impact the operability of the <i>IESO-administered markets</i> .
Appendix A Forms	New	This section contains a list of forms that are used in this market manual.
Appendix B Hydroelectric Generation Resources – Determining a Start and Start Event	New	This section illustrates how the <i>IESO</i> determines a start and start event for hydroelectric <i>generation resources</i> .
Appendix C Price Bias Adjustment Factors Calculation Method for the Real-Time Import and Export Failure Charge	New	This section describes how the <i>IESO</i> calculates the price bias adjustments factors that are used in the <i>settlement</i> calculation of the real-time import and export failure charge.
Appendix D IOG Offset Process	New	This section provides an example of the IOG offset process.

Market Manual Section	Type of Change	Description
List of Acronyms	New	This section contains a list of acronyms that are used in this market manual.
Defined Terms	New	This section contains a list of defined terms that are used in this market manual.
References	New	This section contains a list of market manuals and other IESO documents that are referenced in this market manual.