

Memorandum

To: Technical Panel

From: Stephen Nusbaum, Director, MRP Implementation

Date: August 8, 2024

Re: Responses to Questions from July 23 Education Session on MPM

During the Technical Panel discussions on Market Power Mitigation (MPM), Panel members asked several questions for clarification to which the IESO committed to providing written responses. Should the TP have any additional questions regarding the responses contained herein, the IESO has reserved time for additional Q&As during the August 15 TP education session.

This memo provides additional information on the following topics:

- 1) Settlement Treatment of SEAL Conditions in Current vs. Renewed Market
- 2) Hierarchy of conditions for determining market power
- 3) Four-zone demand forecast methodology
- 4) Compensation mechanisms during cutover to the renewed market

1) Settlement Treatment of SEAL Conditions in Current vs. Renewed Market

A Technical Panel member requested a summary highlighting how SEAL constraints impact settlement in both the current and the renewed market.

Under the current market rules, market participants are required to follow dispatch unless by doing so it would i) endanger the **Safety** of a person, (ii) result in **Equipment** damage, or (iii) would cause the participant to breach an **Applicable Law**, collectively known as "SEAL". To respect SEAL conditions, the IESO applies operational constraints which limit the resource's dispatch. These constraints may result in Congestion Management Settlement Credits (CMSC) payments in the current market. In 2011, the IESO amended the market rules to allow for the recovery of CMSC payments from Dispatchable Generators that are due to SEAL conditions and not conditions on the IESO-controlled grid. This market rule was extended to Dispatchable Loads in 2021.

Today, when SEAL conditions give rise to CMSC payments, Market Assessment and Compliance Division (MACD) will assess the event and where required market participants will be notified of the IESO's intent to recover applicable unwarranted CMSC. A detailed break-down of the settlement clawback at the interval level is provided to market participants along with the notification. As per Market Rules, section 3.5.6E, a market participant has five business days to respond to the IESO notification if it disagrees with the IESO's assessment. If the IESO does not receive a response, the applicable portion of the CMSC payment is recovered under charge type 124 "SEAL Congestion Management Settlement Credit Amount" on the last trade date of the billing month.

In the future market, dispatchable resources will not be eligible for certain settlement amounts when it is dispatched up or down as a result of a SEAL condition being requested. Unlike the current market, these SEAL events will be assessed as part of the automated settlement process. This means that when a resource is determined to be ineligible for a settlement amount due to SEAL, a settlement amount will not be produced. Market participants will receive, as part of their settlement data files, a summary of the SEAL constraints that were applied by the IESO Control Room at the request of the market participant for the specified resource, along with the associated trade date and trade interval(s) for their reconciliation.

The following is a list of settlement amounts in the renewed market for which events coded with a SEAL constraint are automatically adjusted:

- ***RT Make-whole Payments (MWP)***: ineligible to receive a MWP if it was dispatched at the request of the market participant for SEAL reasons. Chapter 0.9, section 3.5.2
- ***RT Generator Offer Guarantee (GOG)***: ineligible to receive a RT GOG if it was dispatched at the request of the market participant for SEAL reasons. Chapter 0.9, section 4.5.2
- ***RT Ramp Down Settlement Amount (RDSA)***: ineligible to receive a RDSA if it was dispatched at the request of the market participant for SEAL reasons. Chapter 0.9, section 4.6.3
- ***Generator Failure Charges (GFC)***: exempted from having a GFC applied if the resource was dispatched at the request of the market participant for SEAL reason (since the resource would not have received RT GOG). Chapter 0.9, section 4.10.3

Table 1: Summary of SEAL Treatment Comparison Between Current and Future Market

	Current Market	Future Market
Charge Types Impacted	<ul style="list-style-type: none"> • CMSC • Ramp Down Payment 	<ul style="list-style-type: none"> • RT MWP • RT GOG • RDSA • GFC – exemption
Market Rule Reference	MR Chapter 9 section 3.5.6c and 3.5.6e.	MRP Chapter 0.9 section 3.5.2, 4.5.2, 4.6.3 and 4.10.3
Overarching Settlement Approach	After-the-fact settlement clawback for ineligible amounts	Before-the-fact assessment based on ineligibility rules, and prevention of relevant settlement calculations
Information used for investigation	Constraints (via manual review of control room logs), dispatch data	Constraints (via automated coding of events), dispatch data
Evaluation Method	Manual	Automatic
Information provided for reconciliation	Notification letter & summary of events	Settlement Data File

2) Hierarchy of conditions for determining market power

A Technical Panel member requested clarity on the priority order in which various market power mitigation conditions will be applied during a given dispatch hour.

The Market Renewal Program proposed amendments (specifically **Appendix 9.4 – Settlement Mitigation** section 1.1.1.3) outlines the hierarchy of ‘most to least restrictive’ market power mitigation conditions as follows:

1. Local market power for operating reserve (ORLOC)
2. Reliability conditions for energy (REL)
3. Global market power for operating reserve (ORGMP)
4. Narrow constrained area for energy (NCA)
5. Dynamic constrained area for energy (DCA)
6. Broad constrained area for energy (BCA)
7. Global market power for energy (EGMP)

This order was chosen primarily based on the conduct thresholds associated with each condition. Reliability related conditions (e.g., local operating reserve condition, reliability constrained resources) have tighter conduct thresholds and hence have higher priority over market-based conditions (e.g., NCA, DCA).

The following table summarizes all of the conduct and impact thresholds used for settlement mitigation. The conduct test is performed on each individual offer parameter (Appendix 9.4), whereas the impact test is performed on settlement amounts (Ch.9 s.5).

Condition	Conduct Threshold <i>(dollars above Reference Level before offers/bids fail conduct test)</i>	Conduct Threshold <i>(percentage above 100% of Reference Level before offers/bids fail conduct test)</i>	Impact Threshold <i>(percentage unmitigated payment can be above mitigated payment before impact test is failed)</i>
Local market power for operating reserve: Operating reserve offer Energy offer up to MLP Speed no-load cost Start-up cost	 \$25 \$25 N/A N/A	 10% 10% 10% 10%	0%
Reliability conditions for energy: Energy offer (up to and above MLP) Speed no-load cost Start-up cost	 \$25 N/A N/A	 10% 10% 10%	0%
Global market power for operating reserve: Operating reserve offer Energy offer up to MLP Speed no-load cost Start-up cost	 \$25 \$25 N/A N/A	 50% 50% 25% 25%	10%
Narrow constrained area for energy: Energy offer (up to and above MLP) Speed no-load cost Start-up cost	 \$25 N/A N/A	 50% 25% 25%	10%
Dynamic constrained area for energy: Energy offer (up to and above MLP) Speed no-load cost Start-up cost	 \$25 N/A N/A	 50% 25% 25%	10%
Broad constrained area for energy: Energy offer (up to and above MLP) Speed no-load cost Start-up cost	 \$100 N/A N/A	 300% 100% 100%	20%
Global market power for energy: Energy offer (up to and above MLP) Speed no-load cost Start-up cost	 \$100 N/A N/A	 300% 100% 100%	20%

3) Four Zone Demand Forecast Methodology

A Technical Panel member asked for additional information regarding how the demand forecast methodology was changing with the move from a single, province-wide demand forecast to a four-zone model.

Refer to the following [Quick Take](#) for a comprehensive overview.

The IESO established and met a corporate performance measure (CPM) in 2022 for day-ahead forecast accuracy (results available [here](#)). The IESO continues to use this metric internally as a guideline for tracking model performance.

4) Compensation mechanisms during cutover to the renewed market

Introduction

A Technical Panel member requested an overview of settlement during the market transition, including in the event of a rollback, with reference to the transitional provisions of the *Market Rules*.

In response to this request, this memo provides a response divided into the following three topics:

- Settlement on April 30, 2024;
- Settlement from May 1, 2024 until market transition completion; and
- Settlement during the rollback.

Settlement on April 30, 2024

Chapter 0.7, section 13.2.4.5 of the *Market Rules* authorizes the IESO to publish a market advisory notice specifying the time at which the market transition will begin:

The *IESO* may suspend *market operations* in the event of

13.2.4.5 a *market transition*, the commencement of which the *IESO* shall specify in a market advisory notice. [Emphasis added]

Based on the current market transition plan, the IESO intends to specify 22:00 EST on April 30, 2024 as the beginning of the market transition. Chapter 0.7, section 13.6.3 governs market participant compensation during the market transition, except for the rollback. It provides:

Where the *IESO* suspends *market operations* due to a *market transition*, the *IESO* shall, except for *dispatch intervals* subject to compensation in accordance with section 13.6.4, compensate *market participants* for following *dispatch instructions* based on *administrative prices* calculated using the *market prices* determined by the *real-time calculation engine* where the *IESO* considers those *market prices* valid. Where the *IESO* does not consider the *market prices* determined using the *real-time calculation engine* valid, or where such *market prices* are not available, it shall compensate *market participants* for following *dispatch instructions* based on *administrative prices* calculated using one, or a combination of, the following methods to establish administrative prices as the *IESO* determines appropriate:

13.6.3.1 the closest preceding *dispatch interval* that has not been administered;

13.6.3.2 the closest subsequent *dispatch interval* that has not been administered;

13.6.3.3 the closest subsequent hourly *market prices* that have not been administered determined by the *day-ahead market calculation engine*; or

13.6.3.4 where the *IESO* gathers sufficient data following the *market transition* to use the methods to establish *administrative prices* set out in section 8.4A.5 based on that data, any or a combination of the methods in that section relying only on data gathered following the commencement of the *market transition*.

Real-time market prices will not be available until May 1, 2024. Accordingly, from 22:00 EST until midnight on April 30, 2024, the IESO will copy forward the most recent valid legacy market price pursuant to subsection 13.6.3.2.

Settlement from May 1, 2024 until Market Transition Completion

From midnight on May 1, 2024 until market transition completion, the IESO will compensate market participants based on the real-time locational marginal price under the renewed market. This is in accordance with section 13.6.3, quoted above, which provides for “administrative prices calculated using the market prices determined by the real-time calculation engine where the IESO considers those market prices valid.”

Where the real-time locational marginal prices are not valid, the IESO will settle market participants in accordance with one or more of the following administrative price methodologies, listed in order of preference:

- copying backward the closest subsequent valid real-time locational marginal price, pursuant to subsection 13.6.3.2;
- copying backward the closest subsequent valid day-ahead locational marginal price, pursuant to subsection 13.6.3.3; and
- in the unlikely event that the IESO gathers valid market prices for at least four business and non-business days during the market transition, by using an hourly average market price from the corresponding hour or hours of the four immediately preceding business days or non-business days, as they case may be, pursuant to subsection 13.6.3.4.

Settlement during the Rollback

Chapter 0.7, section 13.6.4 governs compensation during the rollback. It provides for compensation in accordance with the legacy market rules during the rollback:

Where, pursuant to section 13.2A.2, the *IESO* dispatches the *IESO-controlled grid* and administers the *IESO-administered markets* in accordance with the *legacy market rules*, it shall, during any *dispatch interval* subject to such *dispatch* and administration and any appropriate preceding *dispatch interval* following the commencement of the *market transition*, compensate *market participants* in accordance with the *legacy market rules*.

Where the IESO decides to rollback, legacy market compensation will also apply from midnight on May 1, 2024 until the moment the rollback begins. These intervals will be “appropriate preceding dispatch interval[s] following the commencement of the market transition” pursuant to section 13.6.4.