

Market Rule Amendment Proposal Form

Part 1 - Market Rule Information

Identification No.:	MR-00461-R01
Subject:	Market Renewal Program – Market Power Mitigation: Second Batch Definitions
Title:	Market Power Mitigation: Second Batch Definitions
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration <input checked="" type="checkbox"/> Deletion <input checked="" type="checkbox"/> Addition
Chapter:	11
Appendix:	
Sections:	
Sub-sections proposed for amending:	
Current Market Rules Baseline:	<u>September 13, 2023</u> December 1, 2021

Part 2 - Proposal History

Version	Reason for Issuing	Version Date
1.0	Draft for Stakeholder Review	August 12, 2021
2.0	Draft for Stakeholder Review	December 17, 2021
3.0	Draft for Technical Panel Review	January 4, 2022
4.0	Publish for Stakeholder Review and Comment Re-Published for Stakeholder Review and Comment	January 20, 2022 February 15, 2022
5.0	Submitted for Technical Panel Provisional Vote	March 15, 2022
6.0	Provisionally recommended by Technical Panel; submitted for IESO Board Review	March 22, 2022
7.0	Re-Published for Stakeholder Review and Comment	March 16, 2023
<u>8.0</u>	<u>Re-Published for Stakeholder Review and Comment</u>	<u>December 1, 2023</u>

Approved Amendment Publication Date:

Approved Amendment Effective Date:

Part 3 - Explanation for Proposed Amendment

Summary

The IESO proposes to amend Chapter 11 definitions in the market rules related to the Market Renewal Program (MRP) Second Batch market rule packages (MR-00455). The proposed amendments:

1. Support changes related to MR-00455 Market Power Mitigation;
2. Include other miscellaneous amendments to defined terms;
3. Include changes to the first Batch provisionally approved definitions.

This proposal is based on input from various stakeholder engagement initiatives for the Market Renewal Program (MRP).

Further information on MRP can be found on the [IESO's Market Renewal webpage](#).

Background

Please refer to MRP backgrounder in [MR-00455-R00](#).

Discussion

The following amendments to Chapter 11 market rule definitions are proposed to accompany the Batch 2 MRP market rule amendment package:

1. Support changes related to MR-00455: Market Power Mitigation

The following new and amended defined terms are required to support the market power mitigation framework:

New:

- alternative inertia reference level value;
- alternative reference quantity value;
- dynamic constrained area;
- economic withholding;
- energy bid inertia reference level;
- energy offer inertia reference level;
- energy offer reference level;
- financial dispatch data parameters;
- global market power reference inertia zone;
- instance of inertia economic withholding;
- instance of physical withholding;
- inertia economic withholding;

- intertie reference level;
- intertie reference level value;
- lead time reference level;
- market control entity;
- market control entity for physical withholding;
- maximum number of starts per day reference level;
- minimum generation block down-time reference level;
- minimum generation block run-time reference level;
- minimum loading point reference level;
- narrow constrained area;
- non-financial dispatch data parameters;
- operating reserve offer intertie reference level;
- operating reserve offer reference level;
- physical withholding;
- potential constrained area;
- preliminary view;
- ramp hours to minimum loading point reference level
- reference level;
- reference level value;
- reference quantity;
- reference quantity value;
- short-run marginal benefit;
- short-run marginal cost;
- simulated as-offered energy locational marginal price;
- simulated as-offered operating reserve locational marginal price;
- simulated intertie reference level energy locational marginal price;
- simulated intertie reference level operating reserve locational marginal price;
- simulated reference quantity energy locational marginal price;
- simulated reference quantity operating reserve locational marginal price;
- speed no-load offer;
- speed no-load offer reference level;
- start-up offer;
- start-up offer reference level;
- unrestricted competition.

Non-financial dispatch data parameters:

New:

- energy per ramp hour;
- energy ramp rate reference level;
- operating reserve ramp rate reference level;
- lead time;
- thermal state;
- ramp hours to minimum loading point.

Deleted:

- Delete existing definitions of 'speed-no-load cost' and 'start-up cost' – definitions are no longer required.

Amended:

- Amend the definition of 'minimum generation block down-time' to specify that this parameter is applicable for each thermal state, and replace references to 'facility' with 'resource.'
- Amend the definition of 'maximum number of starts per day.'

2. Other Miscellaneous Terms

New:

- generation offer guarantee eligible resource;
- intertie border price;
- locational marginal price
- maximum daily energy limit;
- non-dispatchable generation resource;
- real-time generation offer guarantee;
- variable generation resource;
- mandatory window;
- pre-dispatch calculation engine;
- real-time calculation engine.

Amended:

- Amend the definitions for 'energy market' and 'physical market' to include the day-ahead market;
- Amend the definition of 'notice of disagreement' to include a reference to section 6.6 of Chapter 9;
- Amend the definition of 'offer' to include the day-ahead market and specify that it includes dispatch data parameters that are submitted in accordance with section 3 of chapter 7;
- Amend the definition of 'pre-dispatch schedule' to specify it may include all hours of the next dispatch day as determined by the pre-dispatch calculation engine;
- Amend the definition of 'variable generation' to mean all energy that is supplied by a variable generation resource.

3. Changes to Batch 1 Provisionally Approved Definitions:

- Amend the definition of 'day-ahead schedule' to fix a grammatical error and to replace reference to the 'dispatch algorithm' to the new defined term 'DAM calculation engine;'
- Amend the definition of 'minimum generation block run-time' to fix a minor grammatical error and to delete 'of the associated facility' – this text is unnecessary as the parameter for minimum generation block run-time is specific to a resource.

4. Changes to Batch 1 Provisionally Approved Definitions – December 1, 2023:

- Amend the following definitions to delete the text “exercising market power by” within the definitions:
 - ‘economic withholding’;
 - ‘intertie economic withholding’;
 - ‘physical withholding’.
- Amend the definition of ‘short-run marginal benefit’ by replacing “offtakes” with “exports”.

Part 4 - Proposed Amendment

Definitions

alternative intertie reference level value means the *intertie reference level value* determined by the IESO pursuant to MR Ch.7 s. ~~ection~~ 22.19.3 of Chapter 7 to re-run the conduct test and impact test on the *offers* or *bids* that failed an impact test;

alternative reference quantity value means the *reference quantity value* determined by the IESO pursuant to MR Ch.7 s. ~~ection~~ 22.15.21 of Chapter 7 to re-run the conduct test and impact test on the *offers* that failed an impact test;

dynamic constrained area or *DCA* means a *potential constrained area* designated as a *DCA* pursuant to MR Ch.7 s. ~~ection~~ 22.10.3 of Chapter 7;

economic withholding means ~~exercising market power by~~ submitting *financial dispatch data parameters* or *non-financial dispatch data parameters* outside a *resource’s reference level values* by more than the applicable threshold;

energy bid intertie reference level means an *intertie reference level* for an *energy bid*;

energy offer intertie reference level means an *intertie reference level* for an *energy offer*;

energy offer reference level means a *reference level* for an *energy offer*;

energy market means the *day-ahead market* and *real-time market* for *energy* administered by the IESO pursuant to MR Ch. ~~apter~~ 7, in which *energy offers* and *energy bids* are cleared and a *market price* for *energy* is determined;

energy per ramp hour means the average amount of *energy* in MWh that a *generation resource* is expected to produce in each hour that is part of the *ramp hours to minimum loading point*;

energy ramp rate reference level means a *reference level* for a *resource’s ramp rate* for *energy*;

financial dispatch data parameters means a subset of *dispatch data* that are represented as financial values and for which the IESO must determine *reference levels*;

generation offer guarantee eligible resource or *GOG eligible resource* means a *generation resource* that is eligible for a *real-time generation offer guarantee* or *day-ahead market generation offer guarantee* in accordance with [MR Ch.apter-9](#);

global market power reference inertie zone means an *inertie zone* designated pursuant to [MR Ch.7 ss.ections-22.11.1 and 22.11.2-of Chapter 7](#);

instance of inertie economic withholding means a *dispatch day onfor* which at least one of a *market participant's bids* or *offers* on a *boundary entity resource* failed a conduct test and associated impact test used to assess *inertie economic withholding* in an uncompetitive *inertie zone* in either the *day-ahead market* or *real-time market*;

instance of physical withholding means a *dispatch day onfor* which at least one of a *market participant's offers* for a *resource* failed a conduct test and associated impact test used to assess *physical withholding* in either the *day-ahead market* or *real-time market*;

inertie border price or *IBP* ~~means~~ means, in respect of an *inertie zone*, the *locational marginal price* ~~price~~ of energy or *operating reserve* minus the inertie congestion price, determined in the *real-time market* or *day-ahead market* in accordance with the provisions of [MR Ch.apter-7 or the administrative price, where applicable](#). ~~For greater clarity, the inertie border price does not include the inertie congestion price;~~ [Note: The changes to this definition were previously presented to stakeholders as part of the Market and System Operations batch via MR-00461-R05 and are provided here for reference.]

inertie economic withholding means ~~exercising market power by~~ submitting *offers* or *bids* on a *boundary entity resource* that are outside a *boundary entity resource's inertie reference level values* by more than the applicable threshold;

inertie reference level means an IESO-determined formula to calculate an *inertie reference level value*;

inertie reference level value means an IESO-determined estimate of a *dispatch data* parameter that a *market participant* would have submitted for a *boundary entity resource* if such *boundary entity resource* were subject to *unrestricted competition*;

lead time means the amount of time, in hours, required for a *generation resource* to complete its start-up procedures and reach its *minimum loading point* from the applicable *thermal state*;

lead time reference level means a *reference level* for a *resource's lead time*;

locational marginal price or *LMP* means, in respect of a *pricing node*, the price of *energy* or *operating reserve* determined in the *real-time market* or in the *day-ahead market* in accordance with the provisions of [MR Ch.apter-7](#);

mandatory window means the period time on a *dispatch day* that begins following the *real-time market unrestricted window* and that ends 10 minutes before the *dispatch hour*, or in the case of a *boundary entity resource*, that ends an hour and 10 minutes before the *dispatch hour*;

market control entity means a person or entity disclosed by a *market participant* to the IESO pursuant to MR Ch.7 s. ~~ection~~ 22.9.1 of Chapter 7 of the market rules;

market control entity for physical withholding means the *market control entity* that a *market participant* has designated pursuant to MR Ch.7 ss. ~~ections~~ 22.9.2-22.9.7 of Chapter 7 of the market rules;

maximum daily energy limit means (i) for a dispatchable generation resource that is a non-quick start resource and is not a nuclear generation resource, a maximum ~~amount~~ quantity of energy in MWh that may be scheduled for a resource within a dispatch day at or above its minimum loading point excluding the hours scheduled for the ramp up energy to minimum loading point or (ii) for any other resource, a maximum quantity of energy in MWh that may be scheduled for a resource within a dispatch day; [Note: The changes to this definition were previously presented to stakeholders as part of the Market and System Operations batch via MR-00461-R05 and are provided here for reference.]

Note: The previous version of this amendment proposal (version 4.0) showed ‘*maximum number of starts per day*’ as a new defined term in error. This term is an existing term that is being amended:

Replace:

maximum number of starts per day means the number of times that a *resource* can be started within a *dispatch day*;

With the following:

maximum number of starts per day means the number of times that a *resource* can be started within a *dispatch day*;

maximum number of starts per day reference level means a reference level for a *resource*’s *maximum numbers of starts per day*;

minimum generation block down-time means, for each *thermal state*, the minimum time, in hours, between the time a *generation resource* was last at its *minimum loading point* before de-synchronization and the time the *generation resource* reaches its *minimum loading point* again after synchronization;

minimum generation block down-time reference level means a reference level for a *resource*’s *minimum generation block down-time*;

minimum generation block run-time reference level means a reference level for a *resource*’s *minimum generation block run-time*;

minimum loading point reference level means a reference level for a *resource*’s *minimum*

loading point;

narrow constrained area or *NCA* means a *potential constrained area* designated as a *NCA* pursuant to ~~MR Ch.7 s. 22.10.2 of Chapter 7;~~

non-dispatchable generation resource means a *generation resource* within the *IESO control area* that ~~is not subject to dispatch by the IESO and which~~ is a *self-scheduling generation resource*, ~~transitional scheduling generation resource~~ or *intermittent generation resource*; [Note: The changes to this definition were previously presented to stakeholders as part of the Market and System Operations batch via MR-00461-R05 and are provided here for reference.]

non-financial dispatch data parameters means a subset of *dispatch data* that are not represented as financial values and for which the *IESO* must determine *reference levels*;

notice of disagreement means a notice provided by a *market participant* in accordance with ~~MR Ch.9 s. 6.6 of Chapter 9~~ to the *IESO* in regard to a disagreement over a *preliminary settlement statement*;

offer means a statement of the quantities and prices of a commodity that a seller is willing to provide ~~at different market prices for that commodity~~ in the day-ahead market, *real-time market*, ~~the day-ahead market~~, the *procurement markets*; or the *capacity auction* and includes *dispatch data parameters* that are submitted in accordance with ~~MR Ch.7 s. 3 of Chapter 7;~~ [Note: The changes to this definition were previously presented to stakeholders as part of the Market and System Operations batch via MR-00461-R05 and are provided here for reference.]

operating reserve offer inertia reference level means an *inertia reference level* for an *offer* to provide *operating reserve*;

operating reserve offer reference level means a *reference level* for an *offer* to provide *operating reserve*;

operating reserve ramp rate reference level means a *reference level* for a *resource's* ramp rate for *operating reserve*;

physical market means a *day-ahead market*, *real-time market* and/or a *procurement market* administered by the *IESO* pursuant to ~~MR Chapter 7;~~

physical withholding means exercising market power by submitting *offer* quantities of *energy* or *operating reserve* less than a *resource's* *reference quantity value* by more than the applicable threshold;

potential constrained area means an electrical area of the *IESO-controlled grid* that can be created when a single or multiple transmission constraints bind, leaving a reduced set of *resources* that can meet the load behind the transmission constraints;

pre-dispatch calculation engine means an algorithm that consists of a sequence of optimization problems solved by the IESO to determine schedules and prices over the pre-dispatch look-ahead period in accordance with [MR Ch.apter-7](#) to meet the needs of the pre-dispatch timeframe;

pre-dispatch schedule means an hourly schedule for the remaining hours of a *dispatch day* and may include all hours of the next *dispatch day* as determined by the *pre-dispatch calculation engine*;

preliminary view means a statement from the IESO of the *reference levels* and *reference quantities* that the IESO intends to register for a *resource*;

Replace:

ramp hours to minimum loading point means a *reference level* for a *resource's ramp hours to minimum loading point*;

With the following:

ramp hours to minimum loading point means the number of hours required for a *generation resource* to ramp up from synchronization to its *minimum loading point*;

ramp hours to minimum loading point reference level means a *reference level* for a *resource's ramp hours to minimum loading point*;

real-time calculation engine means an algorithm that consists of a sequence of optimization problems solved by the IESO to determine schedules and prices for the *dispatch interval* and the subsequent ten 5-minute intervals in accordance with [MR Ch.apter-7](#) to meet the needs of the *real-time market*;

real-time generation offer guarantee means an arrangement that meets the requirements of [MR Ch.apter-9](#);

reference level means an IESO-determined formula to calculate a *reference level value*;

reference level value means an IESO-determined estimate of a *dispatch data* parameter that a *resource* would have submitted if it were subject to *unrestricted competition*;

reference quantity means an IESO-determined formula to calculate a *reference quantity value*;

reference quantity value means an IESO-determined estimate for the quantity of *energy* or *operating reserve* that a *market participant* would have submitted for a *resource* if it were subject to *unrestricted competition*;

short-run marginal benefit means a financial benefit that accrues to a *market participant* with respect to a *boundary entity resource* that only accrues if that *boundary entity resource* [offtakes exports](#) energy and does not accrue otherwise;

short-run marginal cost means a financial cost incurred by a *market participant* with respect to

its resource that is only incurred if that resource provides energy or operating reserve and is not incurred otherwise;

simulated as-offered energy locational marginal price (LMP) means the energy locational marginal price produced by simulating the day-ahead market or real-time market, as applicable, using the inputs used by the relevant calculation engines for the dispatch day for a resource;

simulated as-offered operating reserve locational marginal price (LMP) means the operating reserve locational marginal price produced by simulating the day-ahead market or real-time market, as applicable;

simulated intertie reference level energy location marginal price (LMP) means the energy locational marginal price at an uncompetitive intertie zone produced by simulating the day-ahead market or real-time market, as applicable;

simulated intertie reference level operating reserve location marginal price (LMP) means the operating reserve locational marginal price at an uncompetitive intertie zone produced by simulating the day-ahead market or real-time market, as applicable;

Replace:

simulated reference quantity energy locational marginal price (LMP) means the energy locational marginal price produced by simulating the day-ahead market or real-time market, as applicable, using the inputs used by the relevant calculation engines by replacing the submitted dispatch data that failed the conduct test with the applicable reference quantities and reference levels for the dispatch day for a resource;

With the following:

simulated reference quantity energy locational marginal price (LMP) means the energy locational marginal price produced by simulating the day-ahead market or real-time market, as applicable, using the inputs used by the relevant calculation engines and the applicable reference quantities and reference levels for the dispatch day for a resource;

simulated reference quantity operating reserve locational marginal price (LMP) means the operating reserve locational marginal price produced by simulating the day-ahead market or real-time market, as applicable, using the inputs used by the relevant calculation engines and the applicable reference quantities and reference levels for the dispatch day for a resource;

speed no-load offer means the hourly dollar amount offered by the registered market participant to operate/maintain a generation unit in a resource synchronized status while injecting no with zero net energy to injected into the IESO-controlled grid as offered by the registered market participant; [Note: The changes to this definition were previously presented to stakeholders as part of the Market and System Operations batch via MR-00461-R05 and are provided here for reference.]

speed no-load offer reference level means a reference level for a speed no-load offer;

start-up offer is the dollar amount offered by the registered market participant to bring an off-

line resource to its *minimum loading point* based on the resource's *thermal state*;

start-up offer reference level means a *reference level* for a *start-up offer*;

thermal state means the state of a *dispatchable generation resource*, other than a *quick-start resource* or a *nuclear generation resource*, that is either a hot, warm or cold state, as the case may be, relative to the last *dispatch hour* at which the resource was at its *minimum loading point*;

unrestricted competition means a counterfactual market absent any conditions that would require testing for market power pursuant to the *market rules*;

Note: The previous version of this amendment proposal (version 4.0) showed '*variable generation*' as a new defined term in error. This term is an existing term that is being amended:

Replace:

variable generation means all *energy* that is supplied by a *variable generation resource*;

With the following:

variable generation means all *energy* that is supplied by a *variable generation resource*;

Changes to Definitions Provisionally Approved by the IESO Board in MR-00461-R00: Batch 1 Definitions:

Provisionally approved version:

day-ahead schedule means the hourly schedule for the 24-hour period of a next *dispatch day* as determined by the *dispatch algorithm* during the *day-ahead market*;

Revised (proposed changes to the provisionally approved version shown in highlights):

day-ahead schedule means the hourly schedule for the 24-hour period of the next *dispatch day* as determined by the *DAM calculation engine* during the *day-ahead market*;

Provisionally approved version:

minimum generation block run-time means the number of hours that a *generation resource* must be operating at *minimum loading point*; in accordance with the technical requirements of the associated *facility*;

Revised:

minimum generation block run-time means the number of hours that a *generation resource* must be operating at *minimum loading point*; in accordance with its technical requirements;