

Market Rule Amendment Proposal Form

Part 1 - Market Rule Information

Identification No.:	MR-00461-R05
Subject:	Market Renewal Program – Market and System Operations
Title:	Market Renewal Program – Market and System Operations
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration <input checked="" type="checkbox"/> Deletion <input checked="" type="checkbox"/> Addition
Chapter:	Chapter 11
Appendix:	
Sections:	
Sub-sections proposed for amending:	
Current Market Rules Baseline:	

Part 2 - Proposal History

Version	Reason for Issuing	Version Date
1.0	Draft for Stakeholder Review	July 14, 2023
2.0	Draft following Stakeholder Review Period	March 13, 2024
3.0	Draft for Technical Panel Review	March 26, 2024
4.0	Publish for Stakeholder Review and Comment	April 11, 2024

Approved Amendment Publication Date:

Approved Amendment Effective Date:

Part 3 - Explanation for Proposed Amendment

Provide a brief description that includes some or all of the following points:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

The IESO proposes to amend various Chapter 11 definitions in the market rules to support the Market Renewal Program (MRP) Market and System Operations batch of market rule packages (MR-00454-R00, MR-00454-R01, MR-00454-R02, MR-00454-R03). In addition, this proposal also includes further amendments to defined terms that were previously provisionally approved in prior batches.

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

Background

Please refer to MRP background in [MR-00450-R00](#).

Discussion

The accompanying "[Summary of Market and System Operations](#)" readers guide provides a summary of the market rule amendments to Chapter 7 of the market rules.

The following amendments to Chapter 11 market rule definitions are proposed to accompany the market and systems operation batch of MRP market rule amendments:

New:

- availability declaration envelope;
- commitment cost parameters;
- day-ahead market expiration;
- day-ahead market restricted window;
- day-ahead market submission window;
- electrical island;
- energy limited resource;
- forecast quantity;
- lead time;
- main island;
- market operations;
- 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;
- pre-dispatch process;
- ramp up energy to minimum loading point;
- real-time market restricted window;
- real-time market unrestricted window;

- reserve loading point;
- standing dispatch data;
- steam turbine percentage share;
- variable generation forecast quantity; and
- variable generation resource;

Amended (includes those defined terms introduced as part of prior batches and amended under MSO):

- bid;
- billing period;
- binding pre-dispatch advisory schedule;
- cascade group;
- day-ahead operational commitment;
- day-ahead operational schedule;
- demand response bid price threshold;
- demand response energy bid;
- dispatch centre;
- dispatch data;
- dispatch scheduling error;
- dispatchable load;
- elapsed time to dispatch;
- extended pre-dispatch operational commitment
- generation station service;
- IESO-controlled grid model;
- intertie border price or IBP;
- intertie congestion price or ICP
- linked wheeling through transaction;
- maximum daily energy limit;
- maximum daily trading limit;
- minimum daily energy limit;
- minimum shut-down time;
- non-committed resource;
- non-dispatchable generation resource
- non-dispatchable load
- obligation period;
- offer;
- one-day advance approval;
- quick start resource;
- real-time market mandatory window;
- reference bus;
- release notification;
- speed no-load offer;
- stand-alone pre-dispatch operational commitment;
- start-up time;
- time lag;

- variable generator; and
- virtual transaction.

Deleted:

- capability factor;
- combined guaranteed costs;
- dispatch algorithm;
- schedule of record;
- start volume;
- unconstrained IESO-controlled grid model; and
- wear and tear.

Supplemental information on specific sections in Chapter 7 which explicitly cross-reference to the “applicable market manual” is provided below:

demand response bid price threshold specifies, in accordance with the applicable market manual, that there is a price which a demand response energy bid must exceed in the real-time market. Market Manual 4.1: Submitting Dispatch Data [s.2.4.1] in the Physical Markets identifies the applicable threshold for demand response energy bids.

Definitions

Rule Notes:

1.—[Intentionally left blank]

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In the market rules:

availability declaration envelope means the most recent maximum quantity of *energy* included in a *bid* or *offer* submitted in the *day-ahead market* under MR Ch.7 s.3.1.11, as issued by the *IESO* under MR Ch.7 s.4.8.1;

bid means a statement of the quantities and prices of a commodity that a buyer is willing to will purchase at different market price levels for that commodity in the *day-ahead market*, the *real-time market* or the *procurement markets* and includes dispatch data parameters that are submitted in accordance with MR Ch.7 s.3;

billing period means, in respect of the purchase or sale of *TRs* in a round of a *TR auction*, a period of a *trading week*, in respect of the *day-ahead market*, the *real-time market*, and the *settlement* of amounts owing to *TR holders* under MR Ch.9 s.3.8.1-section 4.4.1 of Chapter 8, a period of a calendar month;

binding pre-dispatch advisory schedule means those dispatch hours of the *pre-dispatch schedule* for a *GOG-eligible resource* (i) that are the initial set of contiguous dispatch hours is greater than or equal to its *minimum loading point* excluding the hours scheduled to-for reflect the *ramp up energy to minimum loading point*, and (ii) that is-are the basis for a *start-up notice* for a *stand-alone pre-dispatch operational commitment* or *advanced pre-dispatch operational commitment*;

capability factor means the ratio of the energy which could have been delivered by a generating station with generation unit limitations in effect, to the energy, over the same period of time, that could have been delivered if the generating station had operated at its maximum continuous rating;

cascade group means one or more *forebays* in a *cascade-river system* in which all resources registered across each forebay have the same owner;

combined guaranteed costs means all eligible costs incurred by a generation facility from either the point of ignition or synchronization to the IESO-controlled grid as applicable, until the earlier of the end of the minimum generation block run-time and the end of the minimum run-time for the generation facility;

commitment cost parameters means *start-up offer, speed-no-load offer, and the portion of an energy offer up to and including the minimum loading point;*

day-ahead market expiration means *the earliest time at which the IESO publishes or issues day-ahead market results in accordance with MR Ch.7 ss.4.7.2 and 4.8.1 or when the IESO declares a day-ahead market failure in accordance with MR Ch.7 s.4.3.2;*

day-ahead market restricted window means *the period of time commencing at 10:00 EPT on the day prior to the relevant dispatch day until day-ahead market expiration;*

day-ahead market submission window means *the period of time commencing at 06:00 EPT and ending at 10:00 EPT on the day prior to the relevant dispatch day;*

day-ahead operational commitment means *a minimum scheduling constraint established by the IESO to a GOG-eligible resource's minimum loading point based on the day-ahead schedule to respect the resource's minimum generation block run-time during the hours specified by the IESO pursuant to MR Ch.7 s.4.8.2.2B.2.2.2;*

day-ahead operational schedule means *the hours in a GOG-eligible resource's day-ahead schedule that are greater than or equal to the minimum loading point excluding the hours scheduled to reflect for the ramp up energy to minimum loading point;*

demand response bid price threshold means *the price at which a demand response energy bid shall exceed, in the day-ahead commitment process market and the real-time energy market, to be considered a demand response energy bid in accordance with the applicable market manual;*

demand response energy bid means *a bid in the day-ahead commitment process day-ahead market, and a bid in the real-time energy market that is, greater than the demand response bid price threshold and less than the MMCP, by a capacity market participant entered for either a capacity dispatchable load resource or an hourly demand response resource to fulfill a capacity obligation availability requirement;*

dispatch algorithm means *the mathematical algorithm used by the IESO to determine various operating schedules and prices in accordance with Chapter 7;*

dispatch centre means, in respect of a ~~registered~~ facility or group of facilities, an attended location at which employees have the authority and capability to dispatch the facilities based on the dispatch instructions received from the IESO;

dispatch data means *the offers, bids, self-schedules or forecasts of intermittent generation required to be submitted to the IESO in accordance with Chapter 7 and/or Chapter 7A and used by the IESO to determine day-ahead market schedules, physical operations and physical market prices;*

dispatch scheduling error means *an error made by the IESO in the real-time dispatch process (i) day-ahead market; or (ii) real-time dispatch process that is identified after the results of the day-ahead market or real-time dispatch process, as the case may be, have been published or issued, in circumstances where these market rules, market manuals or any standard, policy or*

procedure established by the IESO pursuant to these *market rules* do not admit of any deviation or departure from ~~such~~the day-ahead market or real-time dispatch process;

dispatchable load means a *load resource* which is subject to *dispatch* by the IESO and whose level is selected or set based on the price of *energy* in the day-ahead market or real-time market, and, for greater certainty, excludes *hourly demand response resources*;

elapsed time to dispatch is means the minimum amount of time, in minutes, between the time at which a startup sequence is initiated for a *generation resource* and the time at which it becomes *dispatchable* by reaching its *minimum loading point*, as registered by a market participant in accordance with MR Ch.7 s.2.2.6K;

electrical island has the meaning provided in the NPCC Glossary of Terms as may be amended from time to time;

energy limited resource means a *dispatchable generation resource* or *dispatchable electricity storage resource* with a *maximum daily energy limit* for the applicable *dispatch day*;

extended pre-dispatch operational commitment means a minimum scheduling constraint extension established by the IESO to a *GOG-eligible resource's minimum loading point* for a duration of one hour immediately following an existing *day-ahead operational commitment*, *stand-alone pre-dispatch operational commitment* or a previously *extended pre-dispatch operational commitment*, based on a *pre-dispatch schedule*, during the hours specified by the IESO pursuant to MR Ch.7 s.5.8.2.2B.2.2.2;

forecast quantity means a forecast to replace the IESO's centralized forecast specific to the *day-ahead market*.

generation station service means *station service* associated with a ~~generating~~*generation facility* that is comprised of one or more *generation units* each of which is associated with a *resource*, including a *resource* that is aggregated in accordance with MR Ch.7 s.-2.3;

~~constrained~~ *IESO-controlled grid model* means the model capable of being used by the relevant calculation engine~~dispatch algorithm~~ and described in MR Ch.7 s.3A.1.34.5.1.2 of Chapter 7;

intertie border price or *IBP* ~~means~~ means, in respect of an *intertie zone*, the locational marginal price ~~price~~ of *energy* or *operating reserve* minus the *intertie 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~~ *intertie border price* ~~does not include the~~ *intertie congestion price*;

intertie congestion price or (*ICP*) means in respect of ~~a given dispatch hour~~ an *intertie zone*, the portion of the locational marginal price that consists of the cumulative congestion costs resulting from the binding import or export transmission limits that affect transactions scheduled at such an *intertie zone*, including any net interchange scheduling limit congestion costs, as determined in the *real-time market* or *day-ahead market* in accordance with the provisions of MR Ch.7 or the *administrative price*, where applicable ~~a price equal to the projected market price for energy or operating reserve for a given~~ *intertie zone* ~~minus the~~

~~projected uniform market price for energy or operating reserve respectively, in the IESO control area, determined in accordance with section 8.1.1A of Chapter 7;~~

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

linked wheeling through transaction means a set of import and export energy transactions scheduled in the *day-ahead market* or the *real-time market* for *boundary entity resources*, that have been linked by the relevant *market participant* pursuant to MR Ch.-7; s.-3.5.819.2;

main island means, in the event of a network split, the island with the largest number of IESO-controlled grid buses;

market operations means the operation of all or part of the IESO-administered markets;

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*; ~~for a resource or collectively from all hydroelectric generation resources registered on the same forebay, where applicable;~~

maximum daily trading limit means the maximum quantity a *virtual trader* may *bid* or *offer* in a given *trading day*, and is the absolute value in MWh submitted by a *virtual trader* in accordance with MR Ch.2 s.5C.1 ~~section 5C.1 of Chapter 2~~, used by the IESO to calculate a *virtual trader's minimum trading limit*, *default protection amount*, and the *bid/offer* quantity limit for *dispatch data* submissions in accordance with MR Ch.7 s.3.10.1.3 ~~section 2.6.7.5 of Chapter 7A;~~

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

minimum daily energy limit means the minimum amount of energy in MWh that must be scheduled within a *dispatch day* for a hydroelectric *generation resource* ~~or collectively from all hydroelectric generation resources registered on the same forebay;~~

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;

minimum shut-down time means the minimum time in hours between shutdown and start-up of a *generation unit resource*. This is measured from the time of de-synchronization from the IESO-controlled grid to the time of re-synchronization on start-up;

non-committed resource means ~~a~~ the *resource* for a *facility* that is neither - in whole or in part - rate-regulated, contracted to the *IESO*, contracted to the *OEFC*, or obligated as a resource backed capacity export to another jurisdiction during the entire duration of a given *obligation period*;

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*;

non-dispatchable load means a *load resource*, within the *IESO control area*, that is not *dispatchable* and whose level is not selected or set by the *IESO* based on the price of *energy* in the *day-ahead market* or *real-time market*;

obligation period means the period of time for which a *capacity market participant* is required to fulfill its *capacity obligation* through the ~~*day-ahead commitment process and energy market*~~;

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 section 3 of Chapter 7;

one-day advance approval means *IESO* approval of a *planned outage* of equipment no later than 148:00 EST on the *business day* prior to the scheduled start date of the *planned outage*;

pre-dispatch process means the process described in MR Ch.7 s.5, used to establish *pre-dispatch schedules* and prices in the *real-time market*;

quick start ~~facility~~resource means a generation ~~*facility*~~*resource* or an *electricity storage ~~facility~~resource* whose electrical *energy* output can be provided to the *IESO-controlled grid* within 5 minutes of the *IESO's* request and is provided by equipment not synchronized to the *IESO-controlled grid* when the request to start providing *energy* is made;

ramp up energy to minimum loading point means the amount of *energy*, in MWh, a *generation resource* is expected to inject in each hour from the time of synchronization to the time it reaches its *minimum loading point*, as described in MR Ch.7 s.3.5.33;

real-time market 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*;

real-time market restricted window means the period of time that begins upon *day-ahead market expiration* and that ends upon the completion of the *dispatch day*;

real-time market unrestricted window means the period of time that begins upon *day-ahead market expiration* and that ends two hours prior to the *dispatch hour*;

reference bus ~~—~~means the bus designated by the *IESO* in accordance with MR Ch.7 App.7.5

~~s.5.2, MR Ch.7 App.7.5A s.5.2 or MR Ch.7 App 7.6 s.5.2 for the purpose of determining the components of *locational marginal price*; the *RWM* on the basis of which the *IESO* determines; where applicable in accordance with section 3.6.2 of Chapter 9, the *energy market price* for the purpose of determining the losses used in calculating contributions to the *transmission charge reduction fund*;~~

release notification means in respect of a *variable generator* that is a *registered market participant*, a notification issued by the *IESO* providing that *energy* may be supplied from the *variable generation facility resource* to the *IESO-controlled grid* as ambient fuel conditions allow until a *dispatch instruction* is sent;

reserve loading point means the minimum level of *energy* output in *MWs* required for a *generation resource* or an injecting *electricity storage resource* to provide its maximum *offered* amount of a given class of *operating reserve*;

~~*schedule of record* means the last valid set of results from the day-ahead commitment process used by the *IESO* for the application of constraints and the calculation of various day-ahead settlement amounts;~~

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*;

stand-alone pre-dispatch operational commitment means a minimum scheduling constraint established by the *IESO* to a *GOG-eligible resource's* minimum loading point based on the *binding pre-dispatch advisory schedule* to respect the *resource's* minimum generation block run-time during the applicable hours specified by the *IESO* pursuant to MR Ch.7 s.-5.8.2.5B.2.2.5;

standing dispatch data means the initial *dispatch data* that is submitted on a *resource* for one or more *dispatch hours* of future *dispatch days*, as specified by a *registered market participant*;

start-up time means the time in hours required to bring a *generation unit resource* or *electricity storage unit resource* on line. This is measured from the time of receiving a request to start the *generation unit* or *electricity storage unit* associated with that *resource* to the time of synchronization;

~~*start volume* means the incremental volume of fuel consumed by a *generation facility*, on a per registered resource basis, for an eligible real-time generation cost guarantee submission from either: (i) the point of ignition to the *minimum loading point* of the submitting eligible *registered facility*, on a per registered resource basis; or (ii) the point of synchronization to the *minimum loading point* of the submitting eligible *registered facility*, on a per registered resource basis, if operating in a full-speed no-load state for more than five minutes in advance of synchronization to the *IESO-controlled grid*;~~

steam turbine percentage share means the percentage of the total steam turbine *generation unit* capacity that is allocated to an associated *pseudo-unit*;

~~*time lag* means an amount of time less than 24 hours that it takes for the water discharged from an upstream *linked forebay* to reach a downstream *linked forebay* hydroelectric generation facility to reach a downstream hydroelectric generation facility with the same registered market participant, and that is on the same cascade river system;~~

~~*unconstrained IESO-controlled grid model* means the model capable of being used by the dispatch algorithm and described in section 4.5.1.1 of Chapter 7;~~

~~*variable generation forecast quantity* means an energy quantity submitted by the registered market participant in the day-ahead market for a dispatchable generation resource that is classified as variable generation to be used instead for the IESO's centralized variable generation forecast quantity for that resource;~~

~~*variable generation resource* means a generation resource associated with a generation facility with a fuel type of wind or solar photovoltaic that (i) has an installed capacity of 5MW or greater, or (ii) that is directly connected to the IESO-controlled grid;~~

~~*variable generator* means a generator associated with whose generation facility is classified as a variable generation resource;~~

virtual transaction means a transaction in the IESO-administered markets in the form described in MR Ch.-7 s.-3.4.1.84B of Chapter 7, that creates a financial obligation to settle against the difference between the day-ahead market virtual zonal price and the real-time market virtual zonal price, without a corresponding injection or withdrawal of energy in the real-time market;

~~*wear and tear* means, for the purposes of the Real-Time Generation Cost Guarantee Program, the useful life consumption of certain parts or equipment of a generation facility that would occur as a result of operation of the generation facility in accordance with prudent industry practices and original equipment manufacturer guidelines of the generation facility. The useful life consumption of certain parts or equipment of a generation facility manifests from applicable physical mechanisms (such as creep and fatigue) during different operating conditions (e.g. start-up, steady-state operation, transients and shutdown);~~