

Market Rule Amendment Proposal Form

Part 1 – Market Rule Information

Identification No.:	MR-00457-R01
Subject:	Market Renewal Program – Load Resources
Title:	Market Renewal Program Interim Alignment – Load Resources
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Addition
Chapter:	Chapters 5, 6 and 7
Appendix:	2.2, 4.17, 4.18, 4.20, 4.22, 4.23 and 6.2
Sections:	Appendix 2.2, Section; 1.2 Chapter 5, Sections 2.3, 4.8, 5.7, 10.1 Chapter 6, Section 10.3 Appendix 6.2, Sections 1.1A, 1.5 Chapter 7, Sections 2.2, 19.2, 19.5, 21.8
Sub-sections proposed for amending:	Various
Current Market Rules Baseline:	September 2022

Part 2 – Proposal History

Version	Reason for Issuing	Version Date
1.0	Draft for Stakeholder Review	September 9, 2022
2.0	Draft for Technical Panel Review	February 7, 2023
3.0	Publish for stakeholder review and comment	February 22, 2023
4.0	Submitted for Technical Panel Provisional Vote	April 11, 2023

Approved Amendment Publication Date:

Approved Amendment Effective Date:

Part 3 – Explanation for Proposed Amendment

Summary

The IESO proposes to amend the market rules to more fully integrate the new defined terms related to loads introduced as part of the first batch of Market Renewal Program (MRP) amendments – Market Entry and Prudentials. These new defined terms relate to load equipment and include the introduction of a new load registration type, price responsive loads.

Key changes include:

- Clarifying the monitoring and control obligations of load facility, load resource and load equipment;
- Incorporating the price responsive load resource type into the applicable registration, metering, and power system reliability obligations for consistency with the non-dispatchable load resource type; and
- Specifying that certain technical requirements pertain to load equipment rather than their associated resources.

Background

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

Discussion

Many of the amendments proposed below are related to integrating price responsive loads into sections of the market rules that are unlikely to be otherwise amended in market renewal. This proposal will also clarify the participation requirements for price responsive loads in virtual demand response portfolios.

Other amendments are proposed that will integrate the terms 'load equipment' and 'load resource' into the market rules. Both of these terms were established in the MRP - Market Entry and Prudentials batch of market rule amendments.

The accompanying [Summary of Changes](#) document prepared for the Interim Alignment batch provides an explanation for each of the amendments proposed below.

Part 4 – Proposed Amendment

Appendix 2.2

1.2 Technical Requirements for Monitoring and Control

1.2.2 Each *connected wholesale customer* shall, for the purposes of submitting to the energy management system referred to in section 12 of Chapter 5 the monitoring and control information required to be provided by a *connected wholesale customer* to the *IESO* pursuant to the provisions of Chapters 4 and 5:

1.2.2.1 provide, maintain and connect to:

- a. where directed by the *IESO* if *transmitter* data is not adequate, each of its ~~*non-dispatchable load facilities*~~ that includes *load equipment* rated individually or in the aggregate at 20MVA or higher that is exclusively associated with ~~*that includes a non-dispatchable load or price responsive load*~~ rated at 20 MVA or higher or that comprises *non-dispatchable loads* the ratings of which in the aggregate equals or exceeds 20 MVA; and
- b. each of its ~~*dispatchable-load facilities*~~ associated with a *dispatchable load*,

monitoring and control devices that meet the specifications and other requirements set forth in the *participant technical reference manual*; and

1.2.2.2 provide and maintain, in accordance with the *participant technical reference manual*, a location and supporting facilities enabling the installation of a communication terminal point between the monitoring and control devices for each of its ~~*dispatchable-load facilities and non-dispatchable-load facilities*~~ referred to in section 1.2.2.1 and the real-time communication network channel or channels provided by the *IESO*.

1.2.5 Each *embedded load consumer* shall, for the purposes of submitting to the energy management system referred to in section 12 of Chapter 5 the monitoring and control information required to be provided by the *embedded load customer* to the *IESO* pursuant to the provisions of Chapters 4 and 5:

1.2.5.1 provide, maintain and connect to:

- a. where directed by the *IESO* if *transmitter* or *distributor* data is not adequate, each of its applicable *load facilities that includes load equipment rated individually or in the aggregate at 20 MVA or higher that is associated exclusively with a non-dispatchable load facilities or price responsive load facilities that include a non-dispatchable load rated at 20 MVA or higher or non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA*; and
- b. each of its applicable *dispatchable load facilities* monitoring and control devices that meet the specifications and other requirements set forth in the *participant technical reference manual*; and

Appendix 4.17 – IESO Monitoring Requirements: Connected Wholesale Customers and Distributors

TYPE	MONITORED QUANTITIES
Connected wholesale customers	For: <ul style="list-style-type: none"> • All dispatchable loads; and Each <i>non-dispatchable load facility</i> that includes <i>a load equipment rated individually or in the aggregate at 20 MVA or higher associated exclusively with a non-dispatchable load or price responsive load rated at 20 MVA or higher or is comprised of non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA</i> , in each case where directed by the <i>IESO</i> if transmitter data is not adequate the following shall be monitored:

Appendix 4.18 – IESO Monitoring Requirements: Embedded Load Consumers

TYPE	SIZE	MONITORED QUANTITIES
Non-dispatchable load or price responsive load	For a non-dispatchable load facility that includes <u>load equipment rated individually or in the aggregate at 20MVA or higher that is associated exclusively with a non-dispatchable load or price responsive load rated at 20 MVA or higher or that is comprised of non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA</u>	Where directed by the IESO if <i>transmitter or distributor</i> data is not sufficient, <ul style="list-style-type: none"> • MW, MVAR, • phase to phase voltages as specified by the IESO; and status of breakers or isolating switches for low voltage capacitors that are part of the <i>IESO-controlled grid</i> or that are subject to a <i>contracted ancillary services</i> contract including by means or within the scope of an agreement similar in nature to an <i>operating agreement</i> entered into with the <i>embedded load consumer</i>

Appendix 4.20 – IESO Monitoring Requirements: Transmitter Performance Standards

PERFORMANCE LEVEL	FACILITIES
For transmission facilities or assets designated by the IESO as medium performance at the time of registration, must meet the medium performance levels in Appendix 4.21	Step-down transformer facilities that supply a <i>dispatchable load facility</i> that is required to meet medium performance monitoring standard Step-down transformer facilities that supply a non-dispatchable load facility that includes <u>load equipment rated individually or in the aggregate at 20 MVA or higher associated exclusively with a non-dispatchable load or price responsive load rated at 20 MVA or higher or that comprises non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA</u>

PERFORMANCE LEVEL	FACILITIES
	Facilities and assets at 50 kV and above designated by the <i>IESO</i> as requiring medium performance

Appendix 4.22 – IESO Monitoring Requirements: Distributors and Connected Wholesale Customer Performance Standards

FUNCTION	Major Dispatchable Load Facility and Significant Dispatchable Load Facility (High Performance)	<i>Minor Dispatchable Load Facility and Non-Dispatchable Load Facility Facilities***</i> that includes <i>load equipment rated individually or in the aggregate at 20 MVA or higher associated exclusively with a non-dispatchable load or price responsive load rated at 20 MVA or higher or is comprised of non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA</i> (Medium Performance)
Data measurements available at the <i>IESO</i> communications interface	Less than 2 seconds from change in field monitored quantity	Less than 10 seconds from change in field monitored quantity
Equipment status change available at the <i>IESO</i> communications interface	Less than 2 seconds from field status change	Less than 10 seconds from field status change
Data skew	Maximum:* 4 seconds	Not applicable
<i>IESO</i> scan period for data measurements	Maximum:* 4 seconds	Minimum:** 4 seconds
<i>IESO</i> scan period for equipment status	Maximum:* 4 seconds	Minimum:** 4 seconds

* The *IESO* may scan more frequently than the maximum.

** The *IESO* may scan less frequently than the minimum.

*** Where directed by the *IESO* if *transmitter* data is not adequate.

Appendix 4.23 – IESO Monitoring Requirements: Embedded Load Consumers Performance Standards

FUNCTION	Major Dispatchable Load Facility and Significant Dispatchable Load Facility (High Performance)	Minor Dispatchable Load Facility and Non-dispatchable Load Facility *** that includes <u>load equipment rated individually or in the aggregate at 20 MVA or higher associated exclusively with a non-dispatchable load or price responsive load rated at 20 MVA or higher or is comprised of non-dispatchable loads the ratings of which in the aggregate equals or exceeds 20 MVA</u> (Medium Performance)
Data measurements available at the <i>IESO</i> communications interface	Less than 2 seconds from change in field monitored quantity	1. Less than one minute from change in field monitored quantity; or 2. Less than 10 seconds from change in field monitored quantity if designated by the <i>IESO</i> as required to maintain <i>reliable</i> operation of the <i>IESO-controlled grid</i> .
Equipment status change available at the <i>IESO</i> communications interface	Less than 2 seconds from field status change	1. Less than one minute from change in field monitored quantity; or 2. Less than 10 seconds from field status change if designated by the <i>IESO</i> as required to maintain <i>reliable</i> operation of the <i>IESO-controlled grid</i> .
Data skew	Maximum:* 4 seconds	Not applicable
<i>IESO</i> scan period for data measurements	Maximum:* 4 seconds	Minimum:** 4 seconds
<i>IESO</i> scan period for equipment status	Maximum:* 4 seconds	Minimum:** 4 seconds

* The *IESO* may scan more frequently than the maximum.

** The *IESO* may scan less frequently than the minimum.

*** Where directed by *IESO* if *transmitter* or *distributor* data is not adequate.

Chapter 5

2.3 Emergency Operating State

- 2.3.1 The *IESO-controlled grid* shall be considered as being in an *emergency operating state* when observance of *security limits* under a *normal operating state* will either:
- 2.3.1.1 require curtailment ~~curtailment of non-dispatchable load~~; or
 - 2.3.1.2 restrict transactions on *interconnected systems* during an *emergency* on the *IESO-controlled grid* or on a neighbouring *electricity system*.

4.8 Reliability Must-Run Resources

- 4.8.1¹ The *IESO* may need to call on specific *registered facilities*, excluding *non-dispatchable loads* ~~facilities or price responsive loads~~, to maintain the *reliability* of the *IESO-controlled grid* whenever sufficient resources for the provision of *physical services*, other than *contracted ancillary services*, are not otherwise offered in the *IESO-administered markets*. Such applicable *registered facilities* are referred to as *reliability must-run resources* and shall be procured either through *reliability must-run contracts* in accordance with this section 4.8 and sections 9.6 and 9.7 of Chapter 7 or by means of the process for directing the submission of *dispatch data* referred to in sections 3.3.10 to 3.3.17 of Chapter 7.

5.7 The Management of Violations to Security Limits

- 5.7.1 When there is a violation of a *security limit* on the *IESO-controlled grid* while in a *normal operating state*, the sequence of control actions taken by the *IESO* shall be defined in its operating procedures and instructions.
- 5.7.2 The operating procedures and instructions of the *IESO* shall allow the use of market mechanisms to the maximum extent possible for purposes of responding to violations of *security limits*.
- 5.7.3 Where market mechanisms fail or are not sufficient to maintain the *security* of the *IESO-controlled grid*, the *IESO* may direct *market participants* to take actions to either prevent the loss of *non-dispatchable load* or price responsive load or to prepare for *contingency events*.

¹ Note concurrent amendment being proposed in MR-00457-R03
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10. Demand Control

10.1 Introduction

- 10.1.1 This section 10 applies in situations on the *integrated power system* where there is insufficient capacity available to satisfy expected *demand*, where operating problems (such as frequency, voltage levels or thermal over-loads) exist which affect the ability to serve load, or where there is a breakdown on any part of the *IESO-controlled grid*. This section 10 identifies actions that the *IESO* may take or direct *market participants* to take to assist in achieving reductions in *demand* to either avoid or alleviate such situations.
- 10.1.2 Pursuant to Chapter 7, the *IESO* shall continuously inform *market participants* of conditions on the *IESO-controlled grid* that may require the *IESO* to initiate reductions in *demand* by *non-dispatchable loads* or *price responsive loads*.

Chapter 6

10.3 Periodic Energy Metering

- 10.3.1 Subject to section 10.3.2, *metering data* relating to the amount of active *energy* and, where relevant, reactive *energy* passing through a *metering installation* shall be collated by *dispatch intervals*.
- 10.3.2² *Metering data* may be collated into 5 or 15 minute intervals by a *metering installation* that was in service on the date of coming into force of this section 10.3.2 and that is used in respect of a *non-dispatchable load facility*, a *price responsive load*, a *self-scheduling generation facility* with a name-plate rating of less than 10 MW, a *transitional scheduling generator* or an *intermittent generator*.

² Note concurrent amendment in MR-00457-R03

Appendix 6.2

1.1A Metering Installation Not Comprised of Two Meters

1.1A.1 Each *metering installation* for which registration is being sought under Chapter 6, section 4.4.2 that does not comply with the dual *meter* requirement referred to in section 4.1.1.2 of Chapter 6 shall meet the following conditions:

1.1A.1.5³ the *metering installation* shall, if used in respect of a *load facility associated with a non-dispatchable load or a price responsive load, ~~non-dispatchable load facility~~*, a *self-scheduling generation facility* with a name-plate rating of less than 10 MW, a *self-scheduling electricity storage facility* with an *electricity storage facility size* of less than 10 MW, a *transitional scheduling generator* or an *intermittent generator*, be capable of collating *metering data* into 5 or 15 minute intervals; and

1.5 Functional Requirements

1.5.1 Each *metering installation* for which registration is being sought under Chapter 6, section 4.4.2 that does not comply with the functional requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:

1.5.1.5⁴ the *metering installation* shall, if used in respect of a *load facility associated with a non-dispatchable load or a price responsive load ~~non-dispatchable load facility~~*, a *self-scheduling generation facility* with a name-plate rating of less than 10 MW, a *self-scheduling electricity storage facility* with an *electricity storage facility size* of less than 10 MW, a *transitional scheduling generator* or an *intermittent generator*, be capable of collating *metering data* into 5 or 15 minute intervals; and

Chapter 7

2. Registration for Physical Operations

2.2 Facilities and Associated Resources Registration

³ Note concurrent amendment in MR-00457-R03

⁴ Note concurrent amendment in MR00457.R03

2.2.3 The *IESO* shall approve a request to register a *facility* and any associated *resources* or to use a *boundary entity resource* if:

2.2.3.1 the *market participant* submits:

- a. the registration information required by this section 2.2;
- b. in the case of a *facility connected* to the *IESO-controlled grid*, a copy of the *connection agreement* pertaining to the *facility* and entered into with the applicable *transmitter*; and
- c. in the case of a *generation facility*, an *electricity storage facility*, or a ~~*dispatchable-load facility*~~ associated with a *dispatchable load*, embedded within a distribution system, a copy of the connection agreement pertaining to the facility and entered into with the applicable distributor;

19.2 Eligibility Requirements for Hourly Demand Response Resources

19.2.4 The following provisions of the *market rules* shall not apply to a *capacity market participant* that is authorized by the *IESO* to participate only with an *hourly demand response resource* and is not a *wholesale consumer* that is associated with a non-dispatchable load or a price responsive load:

19.2.4.1 Chapter 2, sections 5A and 8;

19.2.4.2 Chapter 5, other than section 1.2.1 to 1.2.3, 2.3, 2.4, 5.8 and 5.9;

19.2.4.3 Chapter 7 section 7; and

19.2.4.4 Chapters 6, 8, 10.

19.2.5 ~~*A wholesale consumer*~~ Subject to section 19.2.6, load equipment that is associated with a non-dispatchable load may be registered as participate as a demand response contributor to an hourly demand response resource to satisfy a capacity obligation, provided that the *non-dispatchable load* meets all the applicable eligibility requirements of this section 19.2, and the associated wholesale consumer meets all the and the requirements in the market rules that are applicable to a wholesale consumer that is associated with a non-dispatchable load.

19.2.6 Load equipment that is associated with a dispatchable load or price responsive load shall not be registered as a demand response contributor.

19.5 Energy Market Participation for Capacity Dispatchable Load Resources

Activation Testing for Capacity Dispatchable Load Resources

- 19.5.7 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity dispatchable load resource* to perform activation testing for each resource up to a maximum of two activation tests per *obligation period* to verify that a *capacity obligation* can be satisfied for a duration specified in the applicable *market manual* by the *capacity market participant*.
- 19.5.8 If a *capacity market participant* fails activation testing performed pursuant to section 19.5.7, the *capacity market participant* shall be subject to non-performance charges in accordance with the applicable *market manual*. Failure during activation testing shall be considered a breach of the *market rules* and may result in sanctions in accordance with section 6.2 of Chapter 3.
- 19.5.9 The *IESO* shall provide a *capacity dispatchable load resource* day-ahead notification of test activation and the test activation shall occur within the *availability window* of an *obligation period*.
- 19.5.10 The test activation shall occur in accordance with the *dispatch instructions* for a ~~*dispatchable-load-facility*~~ *dispatchable load* specified in this section 19.5.
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21.8 Interpretation

- 21.8.1 To the extent of any conflict or inconsistency between the provisions of this section 21 and any other provisions of the *market rules*, the provisions of this section 21 shall govern.
- 21.8.2⁵ With respect to Chapter 7, System Operations and Physical Markets-Appendices, the *IESO* will, acting reasonably and consistently at all times with the scope and intent of the amendments referenced in section 21.1:
- 21.8.2a treat electricity storage injecting, or proposing to inject *energy*, as either a dispatchable or self-scheduling generation resource; and
- 21.8.2b treat electricity storage withdrawing, or proposing to withdraw *energy*, as either a *dispatchable load* or ~~*non-dispatchable-load*~~ *price responsive load*, in each case, deeming such changes to be made to the applicable provisions of such Appendices or applicable *market manuals* as may be necessary to give full meaning to the foregoing.

⁵ Note concurrent amendment proposed in MR-00457-R02
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