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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00416-R02		
Subject:	Demand Response Auctions		
Title:	Demand Response Auctions – Energy Market Participation		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Addition
Chapters:	7 & 11	Appendix:	
Sections:	Chapter 7, sections 19.4 (new), 19.5 (new), sections 3.3A, 3.4, 5.5, Chapter 11 definitions		
Sub-sections proposed for amending:			

### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel Review	June 30, 2015
2.0	Publish for Stakeholder Review and Comment	July 9, 2015
3.0	Submitted for Technical Panel Vote	August 4, 2015
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	August 11, 2015
Approved Amendment Publication Date:		
Approved Amendment Effective Date:		

### PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- 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 the market rules in order to implement a Demand Response Auction to allow for the future competitive procurement and development of demand response in Ontario.

Specifically, this amendment proposal will establish energy market participation requirements for:

- Hourly demand response resources with a demand response capacity obligation: and
- Dispatchable load facilities with a demand response capacity obligation.

This proposal is based on the Demand Response Auction stakeholder engagement.

Further information on the Demand Response Auction stakeholder engagement can be found on the IESO's website at:

<http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Demand-Response-Auction.aspx>

#### Background

Demand response auction participants whose offers clear a demand response auction will be required to deliver on a demand response capacity obligation through participation in the energy market with either an hourly demand response resource or with a dispatchable load facility. Both resource types will be required to submit bids into the energy market (day-ahead and real-time) for every hour of the availability window. The bids submitted by resources with a demand response capacity obligation will allow the IESO dispatch process to select the facilities when their bids represent the least-cost resource, to balance supply and demand.

In order for the IESO to activate an hourly demand response resource, the IESO will issue both standby and activation notices to the applicable demand response market participant. Hourly demand response resources will operate within the energy market by providing four hour blocks of demand response when activated. A dispatchable load facility with a demand response capacity obligation will be dispatched through the energy market the same way a dispatchable load is dispatched under the current market rules. Both types of resources will be obligated to fulfill their demand response capacity obligation by bidding into the market for every hour of the availability window at a price that is above a demand response bid price threshold (defined in Chapter 11 below) and below the maximum market clearing price.

#### Discussion

The following proposed market rules specify the energy market participation requirements associated with demand response capacity obligations for an hourly demand response resource or a dispatchable load facility.

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT****Chapter 7**

It is proposed to further expand new section 19, “Demand Response Market Participants with Demand Response Capacity Obligations” in Chapter 7 of the market rules as follows:

**Section 19.4 Energy Market Participation for Hourly Demand Response Resources with Demand Response Capacity Obligations**

- Insert section 19.4.1 to specify that hourly demand response resources are eligible for an availability payment associated with their demand response capacity obligation in accordance with the applicable market manual. Availability payments may be offset by non-performance charges in accordance with section 4.7J of Chapter 9 (refer to MR-00416-R03: Non-Performance Charges & Settlement).

**Standby and Activation Notices**

- Insert section 19.4.2 to require the IESO to issue a standby notice by 07:00 EST to a participant with an hourly demand response resource, when a resource has a day-ahead schedule of record or pre-dispatch schedule that is less than the participant’s energy bid for at least four consecutive hours during the availability window of the dispatch day.
- Insert section 19.4.3 to obligate a participant to remove its resources bids as soon as practicable and before 09:00 EST if they did not receive a standby notice. If the participant’s bids are not removed, the IESO will consider the resource available for activation.
- Insert section 19.4.4 to detail the requirements for the IESO to send a participant specific private activation notice prior to activation, in accordance with the applicable market manual, if the resource has a pre-dispatch schedule that is less than the bid for four consecutive hours during the dispatch day availability window, and a standby notice was issued or the demand response market participant has not removed its bids in accordance with section 19.4.3.
- Insert section 19.4.5 to obligate the participants to comply with activation notices sent by the IESO in accordance with section 19.4.4. If the activation would endanger the safety of any person, damage equipment, or violate any applicable law the participant must notify the IESO as soon as possible if it intends not to comply with the activation.
- Insert section 19.4.6 to specify that if a participant does not comply with an activation notice, the participant may be subject to non-performance charges and that the IESO may take action in accordance with proposed new sections 19.2.2 and 19.2.3 as part of MR-00416-R00, which allows the IESO to remove or refuse continued participation of a resource that has a negative reliability impact. Participants may also be subject to compliance enforcement actions in accordance with section 6 of Chapter 3.
- Insert section 19.4.7 to obligate a participant to notify the IESO if the resource will operate in a manner that differs materially from the activation notice. The notification process to the IESO and what constitutes a material difference will be described in the applicable market manual.
- Insert section 19.4.8 to allow the IESO to disqualify a participant’s hourly demand response resource from future demand response auction participation due to poor performance against activation notices.

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT****Non-performance Events for Hourly Demand Response Resources**

- Insert section 19.4.9 to allow participants to submit non-performance events when the demand response capacity is unavailable. A participant is obligated to inform the IESO of any non-performance event. The notification process will be outlined in the applicable market manual.
- Insert section 19.4.10 to obligate a participant to reflect any non-performance events in its bid by reducing the amount of demand response capacity it reasonably expects it can provide due to any non-performance event.

**Activation Testing for Hourly Demand Response Resources**

- Insert section 19.4.11 to allow the IESO to conduct activation testing to ensure that a demand response capacity obligation is deliverable by the participant. A maximum of two tests will be performed per commitment period.
- Insert section 19.4.12 to specify that a failed activation test will be treated the same as non-compliance to an activation notice and that a participant shall be subject to non-performance charges and compliance sanctions in accordance with section 6.3 of Chapter 3.
- Insert section 19.4.13 to obligate the IESO to notify participants day-ahead of test activations and to perform the test activations during the availability window.
- Insert section 19.4.14 to specify that the test activation will be activated as per the hourly demand response resource activation outlined in this section 19.4
- Insert section 19.4.15 to specify that a resource will not be eligible for any costs related to test activations during a commitment period.

**Section 19.5 Energy Market Participation for Dispatchable Loads with Demand Response Capacity Obligations**

- Insert section 19.5.1 to specify that participants with demand response capacity obligations participating with a dispatchable load facility are eligible for an availability payment associated with their demand response capacity obligation in accordance with the applicable market manual. Availability payments may be offset by non-performance charges in accordance with section 4.7J of Chapter 9 (refer to MR-00416-R03: Non-Performance Charges & Settlement).

**Dispatch of Resources**

- Insert section 19.5.2 to specify that the IESO will schedule a dispatchable load in the real-time market and issue dispatch instructions in accordance with Chapter 7. There will be no change in how a dispatchable load with a demand response capacity obligation is scheduled or dispatched in the energy market.
- Insert section 19.5.3 to obligate a dispatchable load with a demand response capacity obligation to comply with dispatch in accordance with Chapter 7.
- Insert section 19.5.4 to allow the IESO to disqualify a dispatchable load facility from future auction participation due to poor performance against dispatch instructions.

**Outage Notification Requirements for Dispatchable Loads with a Demand Response Capacity Obligation**

## **PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

- Insert section 19.5.5 to obligate dispatchable loads to comply with the outage notification process outlined in Chapter 5.
- Insert section 19.5.6 to obligate a dispatchable load to reflect and take into account any outage in its bid by reducing the amount of demand response capacity it reasonably expects it can provide due to any outage. This reference to outages includes, but is not limited to facility, distributor and transmitter outages.

### **Activation Testing for Dispatchable Load Resources**

- Insert section 19.5.7 to allow the IESO to conduct activation testing to ensure that a demand response capacity obligation is deliverable by the participant. A maximum of two tests will be performed per commitment period.
- Insert section 19.5.8 to specify that a failed activation test will be treated the same as non-compliance to an activation notice and that a participant shall be subject to non-performance charges and compliance sanctions in accordance with section 6.3 of Chapter 3.
- Insert section 19.5.9 to obligate the IESO to notify participants day-ahead of test activations and to perform the test activations during the availability window.
- Insert section 19.5.10 to specify that the test activation shall occur in accordance with dispatch instructions for a dispatchable load facility.
- Insert section 19.5.11 to specify that facility will not be eligible for compensation for any costs related to test activations during a commitment period.

## **Chapter 7 – Integration With Existing Market Rules**

### **Section 3.3A – Dispatch Data Submissions for the Day-Ahead Commitment Process**

- Section 3.3A.2 outlines the dispatch data submission timelines and requirements for resources that intend to participate in the day-ahead commitment process and be eligible for dispatch by the IESO. Hourly demand response resources will be required to submit demand response energy bids, therefore;
  - Section 3.3A.2 has been amended to include “hourly demand response resource.”

### **Section 3.4 – The Form of Dispatch Data**

- Section 3.4 outlines the requirements, obligations and forms of dispatch data. Demand response market participants submitting bids for either an hourly demand response resource or a dispatchable load facility with a demand response capacity obligation must comply with the obligations under section 3.4. The following changes are proposed in section 3.4:
  - Insert section 3.4.16 to outline that a demand response market participant with an hourly demand response resource will submit a demand response energy bid to reduce its energy consumption during the availability window of a commitment period.

### **Section 5.5 – Release of Pre-dispatch Schedule Information**

- Section 5.5.2 outlines the information sent to specific registered market participants that have submitted valid bids or offers for the dispatch day. Section 5.5.2 has been amended to include

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

an hourly demand response resource to ensure they receive the applicable pre-dispatch schedule information.

**Chapter 11 – Defined Terms**

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

Note: demand response energy bids must reflect the amount of demand response capacity available for reduction. Therefore, an hourly demand response resource must modify its bid to reasonably reflect the amount of demand response capacity available, in accordance with existing section 3.3.8 of Chapter 7.

- “demand response bid price threshold” means the price at which a demand response energy bid shall exceed, in the day-ahead commitment process and the real-time energy market, to be considered a demand response energy bid in accordance with the applicable market manual;
- In addition the IESO proposes to amend the definition of “dispatchable load” to specify that an hourly demand response resource is not a dispatchable load facility.

**PART 4 – PROPOSED AMENDMENT****Chapter 7****19. Demand Response Market Participants with Demand Response Capacity Obligations****19.4 Energy Market Participation for Hourly Demand Response Resources**

19.4.1 *A demand response market participant with a demand response capacity obligation participating with an hourly demand response resource shall be eligible for an availability payment in accordance with the applicable market manual. Availability payments may be offset by non-performance charges in accordance with section 4.7J of Chapter 9.*

**Standby and Activation Notices**

19.4.2 *If an hourly demand response resource has a day-ahead schedule of record or a pre-dispatch schedule less than the resource’s total bid quantity for at least four*

consecutive hours during the *dispatch day* availability window, the *IESO* shall issue a **standby notice** to the applicable *demand response market participant* by 07:00 EST **in accordance with** the applicable *market manual*.

19.4.3 If the *IESO* does not issue a **standby notice** to a *demand response market participant* by 07:00 EST, the *demand response market participant* shall remove their *bids* for the *hourly demand response* resource as soon as practicable and before 9:00 EST. **A *demand response market participant* that does not remove their *bids* for the *hourly demand response* resource before 9:00 EST shall comply with any corresponding activation notices issued by the *IESO* in accordance with section 19.4.5.**

19.4.4 The *IESO* shall issue an **activation notice** to a *demand response market participant* ahead of the activation period, **in accordance with** the applicable *market manual* if a standby notice has been issued in accordance with section 19.4.2 or a *demand response market participant* has not removed their *bids* in accordance with section 19.4.3, and the applicable *hourly demand response resource* has a *pre-dispatch schedule* less than the resource's total *bid* quantity for at least four consecutive hours during the *dispatch day* availability window.

19.4.5 If a *demand response market participant* receives an **activation notice** pursuant to section 19.4.4, the *demand response market participant* shall **comply with the activation notice**, unless such a reduction would endanger the safety of any person, damage equipment, or violate any *applicable law*. **In such circumstances, the *demand response market participant* shall notify the *IESO* as soon as practicable.**

19.4.6 A *demand response market participant* may be subject to non-performance charges, and the *IESO* may take action pursuant to sections 19.2.2 and 19.2.3 if a *demand response market participant* does not comply with an **activation notice** pursuant to this section 19, **in accordance with the applicable *market manual***. The *demand response market participant* may also be subject to compliance actions in accordance with section 6 of Chapter 3.

19.4.7 A *demand response market participant* that expects its *hourly demand response resource* to operate in a manner that differs materially from the **activation notice** issued to it in accordance with this section 19 shall notify the *IESO* as soon as possible and **in accordance with** the applicable *market manual*.

19.4.8 The *IESO* may disqualify from future participation in the *demand response auction* any *demand response market participant's hourly demand response resource* that fails to reduce its consumption when called upon in accordance with this section 19.

#### **Non-performance Events for Hourly Demand Response Resources**

19.4.9 A *demand response market participant* shall submit non-performance events, provided that the *demand response market participant* notifies the *IESO* as per the procedures and criteria specified in the applicable *market manual*.

19.4.10 *A demand response market participant shall reduce its bid to take into account and reflect the maximum demand response capacity that it reasonably expects it can provide due to any non-performance event in a commitment period.*

#### **Activation Testing for Hourly Demand Response Resources**

19.4.11 *The IESO may, in accordance with the applicable market manual, direct a demand response market participant with a demand response capacity obligation to perform activation testing for each hourly demand response resource up to a maximum of two test activations per commitment period to verify that a demand response capacity obligation is deliverable by the demand response market participant.*

19.4.12 *If a demand response market participant fails activation testing performed pursuant to section 19.4.11, the demand response 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.*

19.4.13 *The IESO shall provide a demand response market participant day-ahead notification of test activations and the test activation shall occur within the availability window of a commitment period.*

19.4.14 *The test activation shall occur in accordance with the hourly demand response resource activation process specified in this section 19.4.*

19.4.15 *The hourly demand response resource shall not be entitled to compensation for any costs related to any valid test activation conducted during a commitment period pursuant to this section 19.4.*

## **19.5 Energy Market Participation for Dispatchable Loads with Demand Response Capacity Obligations**

19.5.1 *A demand response market participant with a demand response capacity obligation participating as a dispatchable load shall be eligible for an availability payment, in accordance with the applicable market manual. Availability payments may be offset by non-performance charges in accordance with section 4.7J of Chapter 9.*

### **Dispatch of Resources**

19.5.2 *The IESO shall schedule a dispatchable load with a demand response capacity obligation in the real-time market and issue a dispatch instruction to a dispatchable load with a demand response capacity obligation in accordance with Chapter 7.*



19.5.3 A dispatchable load with a demand response capacity obligation shall comply with IESO dispatch instructions in accordance with Chapter 7.

19.5.4 The IESO may disqualify from future participation in the demand response auction any dispatchable load facility that fails to reduce its consumption when called upon in accordance with this section 19.

#### **Outage Notification Requirements for Dispatchable Loads with a Demand Response Capacity Obligation**

19.5.5 Each dispatchable load with a demand response capacity obligation shall comply with the outage notification requirements of Chapter 5.

19.5.6 A dispatchable load with a demand response capacity obligation shall reduce its bid to take into account and reflect the maximum demand response capacity that it reasonably expects it can consume due to any outage.

#### **Activation Testing for Dispatchable Load Resources**

19.5.7 The IESO may, in accordance with the applicable market manual, direct a dispatchable load with a demand response capacity obligation to perform activation testing for each resource up to a maximum of two activation tests per commitment period to verify that a demand response capacity obligation is deliverable by the demand response market participant.

19.5.8 If a demand response market participant fails activation testing performed pursuant to section 19.5.7, the demand response 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 dispatchable load with a demand response capacity obligation day-ahead notification of test activation and the test activation shall occur within the availability window of a commitment period.

19.5.10 The test activation shall occur in accordance with the dispatch instructions for a dispatchable load facility specified in this section 19.5.

19.5.11 The dispatchable load facility shall not be entitled to compensation for any costs related to any valid test activation conducted during a commitment period pursuant to this section 19.5.

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### 3.3A Dispatch Data Submissions for the Day-Ahead Commitment Process

- 3.3A.1 Subject to section 1.7, defining when the day-ahead commitment process shall function, this section 3.3A shall be in effect.
- 3.3A.2 Subject to the standing *dispatch data* provisions of section 3.3.9, each *registered market participant* that intends its *dispatchable generation facility*, including a *generation facility* that intends to operate in *segregated mode of operation* in real-time, ~~or~~ *dispatchable load facility*, or *hourly demand response resource* to be eligible for *dispatch* by the *IESO* for a given *dispatch hour* of a *dispatch day* shall, after 06:00 EST but before 10:00 EST of the *pre-dispatch day*, submit *dispatch data* for those *dispatch hours* of the *dispatch day* including, where applicable, the daily *energy limit* for the *facility* for the *dispatch day*. The *registered market participant* may then only revise such initial *dispatch data* as permitted by this section 3.3A.

### 3.4 The Form of Dispatch Data

- 3.4.1 *Dispatch data* shall relate to a specified *dispatch hour* of the *dispatch day* and to a specified *registered facility*, shall comply with the applicable provisions of this section and sections 3.5 to 3.9 and shall take one of the following forms:
- 3.4.1.1 for a *dispatchable generation facility*, an *offer* to provide a *physical service* to the appropriate *real-time market*. *Offers* accepted result in sales in the *real-time market* only to the extent that, for the *registered market participant* submitting such *offers*, the total value of the *physical services* provided to the *real-time markets* is greater than the total value of the *physical bilateral contract quantities* notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;
- 3.4.1.1.1 for a *dispatchable generation facility* that is classified as *variable generation*, an offer to provide a *physical service* to the appropriate *real-time market* reflecting its *generation facility's* full capacity available for production, determined in accordance with the applicable *market manual*.
- 3.4.1.2 for a *dispatchable load facility*, a *bid* to take *energy* from the *energy market*. *Bids* accepted result in purchases in the *real-time market* only to the extent that, for the *registered market participant* submitting such *bids*, the total value of the *physical services* taken from the *real-time markets* is greater than the total value of *physical bilateral contract quantities* notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;
- 3.4.1.2A [Intentionally left blank – section deleted]

- 3.4.1.3 for a *self-scheduling generation facility*, a *self-schedule* for the provision of *energy* to the *energy market*. *Energy* actually provided by a *self-scheduling generation facility* results in sales in the *real-time market* only to the extent that, for the *registered market participant* designated for that *self-scheduling generation facility*, the total value of *energy* provided to the *real-time market* is greater than the total value of *physical bilateral contract* quantities notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;
- 3.4.1.4 for an *intermittent generator*, a forecast of *energy* expected to be provided to the *energy market*. *Energy* actually provided by an *intermittent generator* results in sales in the *real-time market* only to the extent that, for the *registered market participant* designated for such *intermittent generator*, the total value of *energy* provided to the *real-time market* is greater than the total value of *physical bilateral contract quantities* notified to the *IESO* by that *registered market participant* pursuant to Chapter 8;
- 3.4.1.4A for a *transitional scheduling generator*, a forecast schedule for the provision of *energy to the energy market*; and
- 3.4.1.4B [Intentionally left blank – section deleted]
- 3.4.1.5 [Intentionally left blank – section deleted]
- 3.4.1.6 for a *demand response market participant with an hourly demand response resource*, a *demand response energy bid to reduce its energy consumption during a specified availability window and commitment period in accordance with the applicable market manual*.

## 5.5 Release of Pre-dispatch Schedule Information

- 5.5.1 The *IESO* shall release the initial *pre-dispatch schedule* and associated projections of *market schedules* and shall publish *market prices* by 16:00 EST of each *pre-dispatch day*, and shall release any revised *pre-dispatch schedules* and projections of *market schedules* and shall publish *market prices* as soon as practical after they are determined. The information to be released to *market participants* is described in this section 5.5.
- 5.5.2 For each *registered facility* that is a *boundary entity*, a *dispatchable load facility*, ~~or~~ a *dispatchable generation facility* or an *hourly demand response resource* in respect of which a valid *bid* or *offer* for at least one *dispatch hour* of the applicable *dispatch day* has been submitted, the *IESO* shall release the following information only to the *registered market participant* for that *registered facility*:
- 5.5.2.1 the *pre-dispatch schedule* for that *registered facility*;

- 5.5.2.2 the projected market schedule for that *registered facility*; and
- 5.5.2.3 [Intentionally left blank]
- 5.5.2.4 any requirement of that *registered facility* to submit an *offer* or *bid* under a *reliability must-run contract* and the expected scheduled use of that *registered facility* under *contracted ancillary service* contracts.

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## Chapter 11

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

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

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

### PART 5 – IESO BOARD DECISION RATIONALE

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