Market Rule Amendment Proposal Form

Part 1 - Market Rule Information

Identification No:	MR-00454-R00
Subject:	Market Renewal Program – Market and System Operations
Title:	Market Renewal Program – Market and System Operations
Nature of Proposal:	☒ Alteration ☒ Deletion ☒ Addition
Chapter:	Chapter 7
Appendix:	
Sections:	Chapter 7, All 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 the market rules to codify the Market Renewal Program's (MRP) market and system operations framework.

The amendments incorporate data inputs from market participants and the IESO that are required to produce schedules, commitments, dispatch instructions and prices. Furthermore, the proposed amendments incorporate the processes to schedule, commit and dispatch resources which are integrated to administer the energy and operating reserve market, and to ensure system adequacy and reliability.

The amendments to Chapter 7 of the market rules include the following:

- Consequential amendments to section 1 – Introductory Rules and section 2 – Registration for Physical Operations in the Day-Ahead Market and Real-Time Market;
- Extensive amendments and re-writes of section 3 – Data Submissions for the Day-Ahead Market and the Real-Time Market;
- New sections 4 – The Day-Ahead Market, 5 – The Pre-Dispatch Process, and 6 – The Real-Time Market;
- Amendments to section 7 – IESO Dispatch Instructions, section 8 – Determining Market Prices and Economic Operating Points, section 8.4A – Administrative Pricing, and section 9 IESO Procurement Markets;
- New section 10 – Instructions for Generator Offer Guarantee Eligible Resources which includes details on start-up notices, notices of decommitments and rules specific to resources with operational commitments;
- Extensive amendments to section 11 – Generation Resources and Electricity Storage Resource Synchronization Procedures;
- Consequential amendments to section 12 – Status Reports, Advisories, and Protocols, section 13 – Suspension of Market Operations, section 18 - 20 – Capacity Auctions & Capacity Exports, and section 21 Electricity Storage in the IESO-Administered Markets.

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 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.

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

- MR Ch.7 s.1.6.2 specifies that the IESO Board shall establish energy offer floor prices for variable generation resources and flexible nuclear generation in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.2.1.1.1] specifies that the price offered for (i) flexible nuclear generation must be no less than $-5/MWh, (ii) for variable generation resource, other than the last 10% of available capacity, no less than $-3/MWh; and (iii) for the last 10% of a variable generation resources available capacity, no less than $-15/MWh.

- MR Ch.7 s.2.2.0 specifies that the IESO will establish and maintain a list of boundary entity resources and virtual zonal resources, which shall be set out in the applicable market manual. Market Manual 4.1: Submitting Dispatch Data [Appendix C.2 & E] includes detail on the list of these resources.

- MR Ch.7 s.2.2 – Facility and Associated Resources Registration – multiple references related to facility registration. Market Manual 1.5: Market Registration Procedures specifies the corresponding details.

- MR Ch.7 s.3.1.14.5 specifies that the IESO shall approve an increase to a resource's availability declaration envelope if the increase does not exceed the materiality threshold identified in the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [section 7.5.1] specifies the threshold.

- MR Ch.7 s.3.2.3 authorizes a dispatchable load to identify all or a portion of its load as non-dispatchable load in its day-ahead market submission in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.2.4.1] includes the process for a dispatchable load to identify all or a portion of its load as non-dispatchable.

- MR Ch.7 s.3.3.3.1 authorizes a dispatchable load to identify all or a portion of its load as non-dispatchable load during the real-time market unrestricted window in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.2.4.1] includes the process for a dispatchable load to identify all or a portion of its load as non-dispatchable.

- MR Ch.7 s.3.3.3.2 authorizes a dispatchable load, hourly demand response resource, or a dispatchable electricity storage resource to revise their bids during the real-time market unrestricted window subject to their availability declaration envelope. Bids that seek to increase a resource's availability declaration envelope require IESO approval in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.7.5.] includes the relevant detail specifying the process to expand an availability declaration envelope.

- MR Ch.7 s.3.3.3.3 authorizes dispatchable generation resources and dispatchable electricity storage resources to revise theirs offers subject to their availability declaration envelope. Offers that seek to increase a resources availability declaration envelope require IESO approval in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.7.5] includes the relevant detail specifying the process to expand an availability declaration envelope.

- MR Ch.7 s.3.3.4 b. authorizes certain generation resources that experience a forced outage to submit revised dispatch data on related generation resource which requires notification to the IESO in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.9] includes the relevant detail specifying the communication requirements for submitting replacement energy offers.

- MR Ch.7 s.3.3.5 authorizes market participants to submit revised hourly dispatch data during the real-time market mandatory window, in accordance with the applicable market manual, under certain circumstances and with IESO approval. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [Appendix B.4] includes the relevant detail specifying the requirements for revising hourly dispatch data during the real-time market mandatory window.

- MR Ch.7 s.3.3.7 authorizes market participants to submit revised daily dispatch data in the real-time market restricted window, in accordance with the applicable market manual, under certain circumstances. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [Appendix B.2] includes the relevant detail specifying the requirements for revising daily dispatch data during the real-time market restricted window.

- MR Ch.7 s.3.3.7.4 authorizes a market participant to revise certain daily dispatch data during the real-time market restricted window for reasons specified in the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.2.5] specifies those daily dispatch data parameters that may be changed during the real-time market restricted window and the requirements for revising such dispatch data.

- MR Ch.7 s.3.4.1.1 a. requires an offer for a dispatchable variable generation resource to reflect its full available capacity. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.7.1] includes the relevant detail specifying the requirements for a variable generation resource to submit its total installed capacity net any derates or outages.

- MR Ch.7 s.3.5.19.2 requires linked wheeling through transactions to have both an offer to inject energy into, and bid to withdraw energy from the IESO-controlled grid, and identification that the offer and bid are linked in accordance with the applicable market manual. Market Manual 4.1: Submitting Dispatch Data in the Physical Markets [s.4.2] includes the relevant detail specifying the requirements for submitting linked wheeling through transactions.

- MR Ch.7 s.3.5.29.2 b. requires that a resource's minimum loading point submission not exceed its maximum registered generation capacity in accordance with the applicable

market manual. Market Manual 1.5: Market Registration Procedures [s.3.3.4.3] specifies the registration requirements for minimum loading point.

- MR Ch.7 s.3A.1.1 obligates the IESO to determine a random daily dispatch order for variable generators in accordance with the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [Table 6-1 & 6-3] includes the reporting requirements for the IESO to publish the tie-breaking rankings for variable generation.

- MR Ch.7 s.4.7.4 obligates the IESO to publish a daily dispatch order for variable generators in accordance with 3A.1.1 and the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [Table 6-1 & 6-3] includes the reporting requirements for the IESO to publish the tie-breaking rankings for variable generation.

- MR Ch.7 s.5.5.1 obligates the IESO to use the most current valid inputs in the pre-dispatch calculation engine in accordance with the applicable market manual and Appendix 7.5A. Market Manual 4.3: Operation of the Real-Time Markets [s.2.3] includes the pre-dispatch data inputs for the IESO to use as part of the pre-dispatch process.

- MR Ch.7 s.5.7.3 obligates the IESO to publish a daily dispatch order for variable generators in accordance with 3A.1.1 and the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [Table 6-1 & 6-3] includes the reporting requirements for the IESO to publish the tie-breaking rankings for variable generation.

- MR Ch.7 s.6.2.1 obligates the IESO to use the information described in Appendix 7.6 and the applicable market manual to determine the real-time schedule. Market Manual 4.3: Operation of the Real-Time Markets [s.3.3] includes the data inputs for the real-time scheduling process.

- MR Ch.7 s.6.4.1 obligates the IESO to use the most current valid inputs in accordance with Appendix 7.6 and the applicable market manual to administer the real-time calculation engine. Market Manual 4.3: Operation of the Real-Time Markets [s.3.3] includes the data inputs for the real-time scheduling process.

- MR Ch.7 s.6.6.6 obligates the IESO to publish a daily dispatch order for variable generators in accordance with 3A.1.1 and the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [Table 6-1 & 6-3] includes the reporting requirements for the IESO to publish the tie-breaking rankings for variable generation.

- MR Ch.7 s.7.1.1C obligates the IESO to issue dispatch instructions in accordance with the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.4] contains the procedures for issuing dispatch instructions.

- MR Ch.7 s.7.1.2.1 requires the IESO to issue dispatch instructions using the systems and protocols defined in the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.5.1] contains the procedures for issuing dispatch instructions.

- MR Ch.7 s.7.1.2A requires market participants to confirm receipt of, and their intention to comply with, dispatch instructions in accordance with the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.5.1] contains the procedures for responding to dispatch instructions.

- MR Ch.7 s.7.1.2A1 requires market participants to confirm receipt of a release notification for a variable generation resource in accordance with the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.5.1] contains the procedures for responding to dispatch instructions for variable generation resources.

- MR Ch.7 s.7.1.2C requires dispatchable loads that have indicated their intent to consume energy as a non-dispatchable load to confirm their intention to not comply with each dispatch instruction. Market Manual 4.3: Operation of the Real-Time Markets [s.5.1] contains the procedures for responding to dispatch instructions.

- MR Ch.7 s.7.1.3 requires the IESO to issue dispatch instructions to boundary entity resources using the systems and protocols defined in the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [s.5.3] contains the procedures for issuing dispatch instructions.

- MR Ch.7 s.7.1.3A requires boundary entity resources to confirm receipt of dispatch instructions in accordance with the applicable market manual. Market Manual 4.3: Operation of the Real-Time Markets [section 5.3] contains the procedures for boundary entity resources respond to dispatch instructions.

- MR Ch.7 s.7.5.8B specifies that a real-time import or export failure charge be assessed when a boundary entity resource fails to schedule energy or operating reserve other than for bona fide and legitimate reasons. Market Manual 4.3: Operation of the Real-Time Markets [s.4.5.1.1 & Table 4-1] provides the reasons under which a failure to schedule energy or operating reserve are exempt from the real-time intertie failure charge.

- MR Ch.7 s.12.1.2 requires the IESO to publish advisory notices in one of the following three forms (i) an alert notice; (ii) a warning notice; or (iii) an action notice, as further specified in the applicable market manual. Market Manual 7.2: Near-Term Assessments and Reports [s.4] includes a description of each type of advisory notice and the information contained within.

- MR Ch.7 s.12.1.3 requires the IESO to publish an advisory notice, in accordance with the applicable market manual, in specific circumstances. Market Manual 7.2: Near-Term Assessments and Reports [s.4] describes the process for the IESO to publish an advisory notice.

- MR Ch.7 s.12.1.3A allows the IESO to publish an advisory notice, in accordance with the applicable market manual, for reasons the IESO determines the publication would be of interest to the market. Market Manual 7.2: Near-Term Assessments and Reports [s.4] describes the process for the IESO to publish an advisory notice.

- MR Ch.7 s.18 provides detail on the administration of the capacity auction. There are multiple references to an applicable market manual throughout the section. The applicable market manual referenced in section 18 will continue to be Market Manual 12: Capacity Auctions.

- MR Ch.7 s.19 provides the requirements for capacity market participants and how capacity auction resources must satisfy capacity obligations. There are multiple references to applicable market manuals throughout the section. The applicable market manuals referenced in section 18 are as follows:
    - Market Manual 1.5: Market Registration Procedures
    - Market Manual 2.10: Connection Assessment and Approval;
    - Market Manual 4.3: Operation of the Real-Time Markets;
    - Market Manual 5.5: IESO-Administered Markets Settlement Amounts;
    - Market Manual 7.3: Outage Management; and
    - Market Manual 12: Capacity Auctions.

- MR Ch.7 s.20 details the capacity export request, approval, commitment and scheduling process. There are multiple references to applicable market manuals throughout the section. The applicable market manuals referenced in section 18 are as follows:
    - Market Manual 4.1: Submitting Dispatch Data in the Physical Markets;
    - Market Manual 4.3: Operation of the Real-Time Markets; and
    - Market Manual 13.1: Capacity Export Requests.

- MR Ch.7 s.21 details the market rules that facilitate the inclusion of electricity storage participants in the IESO-administered markets. The applicable market manuals referenced in section 21 are as allows:
    - Market Manual 1.5: Market Registration Procedures;
    - Market Manual 4.1: Submitting Dispatch Data in the Physical Markets; and
    - MR Ch.7 s.21.7 includes broader references to applicable market manuals that are not limited to MM 1.5 and MM 4.1 referenced above.

1. Introductory Rules

~~1.1 Purpose~~

~~1.1.1 This Chapter sets forth rules governing the~~

~~1.1.1.1 registration of *facilities* and any associated *resources*;~~

~~1.1.1.2 use of *boundary entities* and *boundary entities resources*;~~

~~1.1.1.3 real-time operations of the *electricity system*; and~~

~~1.1.1.4 market clearing and pricing process in the *real-time market* and pre-dispatch physical operations and *day-ahead market physical transactions*.~~

1.1 ~~1.2~~ Application

1.~~2~~1.1 The rules in this Chapter apply to:

1.~~2.~~1.1.1 the *IESO*;

1.~~2~~1.1.2 any person who causes or permits electricity or any *physical service* to be conveyed into, through or out of the *integrated power system*;

1.~~2~~1.1.3 any *registered market participant* that submits *dispatch data* with respect to any *resource*; and

1.~~2~~1.1.4 *transmitters*.

~~1.2.2 The rules in this Chapter apply to both the 60 Hz and the 25 Hz portions of the *electricity system*.~~

1.1.~~3~~2 In this Chapter, a reference to the term "area" in the context of *operating reserve* shall be construed as a reference to a portion of the *IESO control area* designated as such by the *IESO* and within which the *IESO* may impose limits on the amount of *ten-minute operating reserve* that can be scheduled from *resources* located within that portion for the purpose of meeting the total requirement for *ten-minute operating reserve* within the *IESO control area*.

1.~~3~~2 Scope of the Physical Markets

1.~~3~~2.1 The *IESO* shall administer ~~two~~three types of *physical markets*: the *day-ahead market,* the *real-time market~~s~~* and the *procurement markets*.

1.~~3~~2.2 The *IESO* shall administer~~, in accordance with sections 3 to 8,~~ the following ~~*real-time*~~ markets in an integrated fashion:

1.~~3~~2.2.1 a *day-ahead market* in *energy*, measured in MWh (comprised of *physical transactions* and *virtual transactions*); ~~and~~

1.~~3~~2.2.2 a *day-ahead market* in several classes of *operating reserve*, measured in MW~~.~~ (comprised of *physical transactions*);

1.~~3~~2.2.3 a *real-time market* in *energy*, measured in MWh (comprised of *physical transactions*); and ~~[Intentionally left blank- section deleted]~~

1.2.2.4 a *real-time market* in several classes of *operating reserve*, measured in MW (comprised of *physical transactions*).

1.2.3 The *IESO* shall administer, in accordance with section 9, the following *procurement markets* to procure certain *physical services* required for *reliable* operation of the *electricity system*:

1.~~3~~2.3.1 markets for *contracted ancillary services*, including *regulation*, *reactive support service* and *voltage control service*, and *black~~-~~start capability*; and

1.~~3~~2.3.2 a market for *reliability must-run contracts*.

1.~~4~~3 Coordination with Control Areas Outside the IESO Control Area

1.~~4~~3.1 The *IESO* shall, where required or appropriate under duly constituted regional *reliability* agreements with one or more other *control areas*~~,~~ and subject to any confidentiality agreements entered into with *market participants* or as part of such *reliability* agreements, share with other *control area operators* all relevant information concerning physical system operations in relation to the *electricity system*.

1.~~5~~4 Delivery in Respect of Extra-provincial Intertie Transactions

1.~~5~~4.1 Where *energy* or an *ancillary service* is being conveyed:

1.~~5~~4.1.1 into the *IESO-controlled grid* from an *intertie zone* outside the Province of Ontario; or

1.~~5~~4.1.2 out of the *IESO-controlled grid* to an *intertie zone* outside the Province of Ontario,

delivery of such *energy* or *ancillary service* to or from, as the case may be, the *boundary entity* shall, for all purposes under these *market rules*, be deemed to occur on the Ontario portion of the applicable *intertie*.

1.~~6~~5 Planned Outages for Maintenance and Upgrades of IESO-Administered Markets Software, Hardware and Communication Systems

1.~~6~~5.1 The *IESO* may, from time to time, undertake *planned outages* on *IESO-administered markets* software, hardware or communication systems for the purpose of maintenance and/or upgrades to those systems. These *planned outages* may result in temporary disruptions to some market activities, including but not limited to submission of *dispatch data*, scheduling, pricing, issuing of *dispatch instructions* and *IESO* report *publishing*.

1.~~6~~5.2 The *IESO* shall, in respect of a *planned outage* referred to in section 1.~~6~~5.1:

1.~~6~~5.2.1 Notify all *market participants*, as far in advance as reasonably practicable, of the timing and duration of the *planned outage*;

1.~~6~~5.2.2 Maintain normal *market operations* during the *planned outage* to the greatest extent practicable; and

1.~~6~~5.2.3 Limit the impact and duration of the *planned outage*, and any resulting disruption to *market operations* to the greatest extent practicable.

1.~~6~~5.3 If a *planned outage* referred to in section 1.~~6~~5.1 is expected to result in a disruption to normal *market operations*, the *IESO* shall notify all *market participants* of the expected disruption and shall specify any required alternative procedures that will be in effect for the duration of the disruption. These alternative procedures shall be designed so as to permit normal *market operations* to the greatest extent practicable. These alternative procedures may include, but are not limited to:

1.~~6~~5.3.1 Submission of *dispatch data* by an alternate means and/or in an alternative form pursuant to section 3.1~~2~~.2; and

1.~~6~~5.3.2 Establishment of *administrative prices* pursuant to section 8.4A.

1.~~6~~5.4 *Market participants* shall comply with the alternative procedures specified by the *IESO* in section 1.~~6~~5.3.

1.~~7~~6 IESO Authorities and Obligations Regarding the Operation of the IESO-Administered Markets~~Day-Ahead Commitment Process Functions~~

1.6.1 The following parameters of the *day-ahead market calculation engine, pre-dispatch calculation engine* and *real-time calculation engine* shall be as specified from time to time by the *IESO Board*:

1.6.1.1 the *maximum market clearing price* that defines the maximum allowable price for *energy*, and the negative of which defines the minimum allowable price for *energy;*

1.6.1.2 the *maximum operating reserve price* that defines the maximum allowable price for any class of *operating reserve*;

1.6.1.3 the constraint violation penalties; and

1.6.1.4 the *settlement floor price* for *energy*;

1.6.2 The *IESO Board* shall establish floor prices for *energy offers* from a *registered market participant* associated with a *variable generation resource* and for *energy offers* from a *generation resource* that has a component classified as *flexible nuclear generation*, in accordance with the applicable *market manual*.

1.6.3 The *IESO* shall establish the following limits for *virtual transactions* for any *virtual transaction zone*:

1.6.3.1 *energy* lamination volume limit; and

1.6.3.2 *offer* or *bid* quantity limit.

1.6.4 The *IESO* shall suspend the *day-ahead market* or *real-time market* as required in accordance with section 13. If the *IESO* suspends the *day-ahead market* or *real-time market* for a given *dispatch day*, the *IESO* shall:

1.6.4.1 inform *market participants* of the suspension the impacted trade date, hours and cause of error if practicable;

1.6.4.2 inform *market participants* of when normal *market operations* is expected to resume; and

1.6.4.3 apply *administrative pricing* in accordance with section 8.4A.

1.6.5 Unless otherwise directed by the *IESO Board*, the *IESO* shall no less than once every two calendar years, commission and *publish* the results of an independent review of the operation and application of the *day-ahead market calculation engine*, *pre-dispatch calculation engine*, and *real-time* calculation engine and the related *dispatch* processes and procedures. The *IESO* shall use the results of such review to determine the need or otherwise for improvements in the calculation engines and related procedures in meeting the objectives of the *market rules* and/or the mathematical representation of the *electricity system* or the solution procedures which form part of the market clearing logic. The first such review shall be completed no later than two years following the MRP commencement date.

1.6.6 If the *IESO* determines the issuance of specific types of information from engine results may facilitate anti-competitive behaviour, the *IESO* may limit the issuance of such information through an *urgent amendment* to these *market rules*. The *IESO* shall advise the *market surveillance panel* of the matter. The *IESO Board* may request the advice of the *market surveillance panel* of the need or otherwise for the *urgent amendment* to remain in effect.

~~1.7.1 The Chief Executive Officer of the *IESO* shall determine when the day-ahead commitment process shall first be used.~~

~~1.7.2 [Intentionally left blank – section deleted]~~

~~1.7.3 The *IESO* shall notify *market participants* at least five *business days* in advance of the day the day-ahead commitment process will first be used.~~

~~1.7.4 The *IESO* shall cancel the day-ahead commitment process for a given *dispatch day* when process or software failures prevent one or more hourly day-ahead commitment process runs from meeting the minimum criteria for a minimum acceptable DACP run, as defined in the applicable *market manual.*~~

~~1.7.5 In accordance with the applicable *market manual*, if the *IESO* cancels the day-ahead commitment process for a given *dispatch day*, the *IESO* shall:~~

~~inform *market participants* of the cancellation;~~
~~inform *market participants* as to whether the day-ahead commitment process will resume for the subsequent *dispatch day.*~~

2. Registration for Physical Operations in the Day-Ahead Market and Real-Time Market

2.1 Requirements for Operating on the Grid

2.1.1 No person shall conduct *physical transactions* in the *day-ahead market* or in the *real-time* ~~*markets*~~*market* or cause or permit electricity or any *physical service* to be conveyed into, through or out of the *integrated power system* unless:

2.1.1.1 that person is authorized to be a *market participant* in accordance with MR Ch.~~apter~~ 2;

2.1.1.2 the *facility* to or from which the electricity or *physical service* is to be so conveyed or the *boundary entity* to which the electricity or *physical service* relates has either been registered by the *IESO* as a *resource* pursuant to section 2.2 or section 2.2A, as the case may be, or is exempt from registration under section 2.1.3;

2.1.1.3 subject to section 2.1.1A, where such *resource* associated with a *generation facility* that is connected electrically to a neighbouring *control area,* and the electricity or *physical service* is to be conveyed out of the *integrated power system* over a *radial intertie*:

a. the person complies with the requirements of Appendix 7.7;

b. the person has entered into a *connection agreement;*

c. the *IESO* has entered into an *interconnection agreement* with the *control area operator*, security coordinator or interconnected *transmitter* for the relevant radial intertie; and

d. the *interconnection agreement* referred to in section 2.1.1.3(c) supports the implementation of the requirements of Appendix 7.7;

2.1.1.4 in accordance with sections 22.1.3 and 22.6.3, that person has provided to the *IESO* all relevant materials the *IESO* may require to determine *reference levels* and *reference quantities* for that person's *resources* and the *IESO* has registered all applicable *reference levels* and *reference quantities* for that person's *resources*;

2.1.1.5 that person has disclosed all of its *market control entities* to the *IESO;*

2.1.1.6 that person has designated a *market control entity for physical withholding* in accordance with section 22.9 for each of its *resources* that is a *dispatchable generation resource*, *dispatchable electricity storage resource* or a *dispatchable load*; and

2.1.1.7 that person has completed all applicable processes to register its *facilities* and any associated *resources* set out in the applicable *market manual*.

2.1.1A Section 2.1.1.3 shall not apply in respect of:

2.1.1A.1 the delivery of electricity or a *physical service* out of the *integrated power system* over a *radial intertie* where such delivery is required to provide support in the case of an *emergency* in a *control area*;

2.1.1A.2 the delivery of electricity or a *physical service* out of the *integrated power system* over a *radial intertie* where such delivery is required to provide support in the case of an *outage* in a *control area*; or

2.1.1A.3 the delivery of electricity or a *physical service* out of the *integrated power system* over an *intertie* that is configured as a *radial intertie* following and as a result of a *contingency event.*

2.1.2 A *market participant* shall not submit, and the *IESO* shall not accept, any *dispatch data* with respect to a *resource*, including a *boundary entity resource*, unless:

2.1.2.1 that *resource,* has been registered for the provision of the *physical service(s)* to which the *dispatch data* relate, or, in the case of a *boundary entity resource*, the *IESO* has authorized the *market participant* to use it for the provision of the *physical service(s)* to which the *dispatch data* relate;

2.1.2.2 that *market participant* is the *registered market participant* for that *resource*; and

2.1.2.3 the *dispatch data* are consistent with: (i) the registration information defining the capabilities of the *resource*; (ii) the *market participant's* reasonable expectations of the current actual capabilities of the *resource*; and (iii) any revision in registration information requested by the *IESO* under section 7.5.6.2 or other provision of these *market rules*.

2.1.3 Subject to section~~s~~ 2.3 ~~and 10.2.6~~, no person that intends to participate in the *IESO-administered markets* or to cause or permit *electricity* or any *physical service* to be conveyed into, through or out of the *integrated power system* shall be required to register a *facility* to or from which the *electricity* or *physical service* is to be so conveyed as a *facility* and any associated *resources* registered with the *IESO* if such *facility* is embedded within a *distribution system*, a *load facility*, a *generation facility* or an *electricity storage facility* and that:

2.1.3.1 in the case of a *generation facility*, has a maximum rated *generation capacity,* net of auxiliary requirements, of less than 1 MW;

2.1.3.2 in the case of a *load facility*, has a maximum load capacity of less than 1 MW;

2.1.3.3 in the case of a *distribution system*, has a maximum load capacity of less than 1 MW; or

2.1.3.4 in the case of an *electricity storage facility*, has a maximum capacity for *energy* for each of injections and withdrawals, net of auxiliary requirements, of less than 1 MW.

2.2 Facility and Associated Resources Registration

2.2.0 The *IESO* shall establish and maintain *boundary entity resources* and *virtual zonal resources,* which shall be set out in the applicable *market manual*.

2.2.1 The *IESO* shall establish a process for registering a *facility* and any associated *resources* or for using a *boundary entity resource* and for registering a *market participant* as a *registered market participant*. Such process shall be set out in the applicable *market manual* and shall include, but not be limited to, the certifications referred to in sections 2.2.3.3 and 2.2.3.4 and the testing and inspection referred to in section 2.2.3.5.

2.2.2 A *market participant* may request to register a *facility* or any associated *resources* or to use a *boundary entity resource*:

2.2.2.1 for the delivery or withdrawal of specific *physical services* pursuant to the provisions of this section 2.2 and, if applicable, section 21.2.

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 *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*;

2.2.3.2 the *IESO* is satisfied on reasonable grounds that the *facility* is capable of operating as described in the registration information or as otherwise provided by the *market rules* in respect of the relevant *physical service*;

2.2.3.3 the *market participant* certifies to the *IESO* that all of the *facilities* and equipment to which its request for registration relates comply with all applicable technical requirements, other than those referred to in MR Ch.2 s~~ection~~ 6.2 ~~of Chapter 2~~, set forth in these *market rules* applicable to all *market participants*, the class of *market participant* of which the *market participant* forms part and the *IESO-administered market* in which the *market participant* wishes to participate;

2.2.3.4 the *market participant* certifies to the *IESO* that it has adequate qualified employees or other personnel and organizational and other arrangements that are sufficient to enable the *market participant* to perform all of the functions and obligations applicable to *market participants*, the class of *market participant* of which the *market participant* forms part and the *IESO-administered market* in which the *market participant* wishes to participate in respect of all of the *facilities,* equipment and any associated *resources* to which its request for registration relates;

2.2.3.5 the *market participant* successfully completes such testing and permits such inspection as the *IESO* may require for the purposes of testing or inspecting whether all of the *facilities* and equipment to which its request for registration relates meet all applicable technical requirements, other than those referred to in MR Ch.2 s~~ection~~ 6.2 ~~of Chapter 2~~, set forth in these *market rules* applicable to all *market participants*, the class of *market participant* of which the *market participant* forms part and the *IESO-administered market* in which the *market participant* wishes to participate;

2.2.3.6 the *market participant* certifies to the *IESO* in writing that all of the *facilities* and equipment to which its request for registration relates

complies with the requirements identified in any applicable *preliminary assessment* or *system impact assessment* associated with that *market participant's facilities* or equipment; and

2.2.3.7 the *market participant* certifies to the *IESO* that all of the *facilities*, equipment and any associated *resources* to which its request for registration relates does not differ materially from the configuration or technical parameters that were used by the *IESO* as the basis for which it issued any applicable approvals for such new or modified *connection* in accordance with MR Ch.4 ss.ection 6.1.14 to 6.1.18 of Chapter 4, unless the applicable *market participant* or *connection applicant* has obtained the approval of the *IESO* for the change in configuration or technical parameter in accordance with MR Ch.4 s.ection 6.1.22 of Chapter 4.

~~2.2.3.8 [Intentionally left blank – section deleted]~~

~~2.2.3A [Intentionally left blank – section deleted]~~

~~2.2.3B [Intentionally left blank – section deleted]~~

2.2.4 The *market participant* designated in the registration information as the *market participant* authorized to submit *dispatch data* with respect to a *resource* shall be the *registered market participant* for that *resource*. The *registered market participant* designated for a *resource* may not be changed without the prior approval of the *IESO*.

2.2.5 The *IESO* shall define the form and content of information, as further specified in the applicable *market manual*, required for registration as a *facility* with associated *resources* where applicable in accordance with this section 2.2.

2.2.6 Where the *facility* sought to be registered is within the *IESO control area*, the information required for registration as a *facility* or as an associated *resource*, as the case may be, shall, subject to any lesser requirements that may be *published* by the *IESO* in respect of the information required for registration of a given class or size of *facility* or any associated *resource*, include, but not be limited to:

2.2.6.1 the identity of the owner and the operator of the *facility* and any associated *resources*;

2.2.6.2 the identity of the *market participant* authorized to submit *dispatch data* with respect to the *resource*;

2.2.6.3 for a *connected facility*, information demonstrating that the *facility* has met the *connection* requirements set forth in MR Ch.apter 4;

2.2.6.4 information demonstrating that the *market participant* designated as the *registered market participant* for the *facility* and its associated *resources* has the operational control necessary to assure delivery or withdrawal of the relevant *physical services* as described in the registration information;

2.2.6.5 for a *connected facility*, the location of the *facility* and the identity of the *primary RWM* that will measure the flow of *energy* between the *resource* and the *IESO-controlled grid*;

2.2.6.6 for a *facility* embedded within a *distribution system* or within a *connected facility* within the *IESO control area* that is *connected* to the *IESO-controlled grid*, the location of that *facility*, the identity of the *primary RWM(s)* through which *energy* will flow between that *facility* and the *IESO-controlled grid* and information demonstrating that *energy* can flow to and from the identified *primary RWM(s)* with allocations and loss factors specified in the registration information;

2.2.6.7 standing technical data defining the ability of the *facility* and any associated *resouces* to deliver or withdraw each *physical service* for which registration is sought including, where relevant, the trade-off functions among *energy* and *operating reserves;*

2.2.6.8 for a *resource* that will be subject to the *IESO's dispatch instructions*, certification that the *resource* has a minimum rated *generation capacity*, net of auxiliary requirements, or a minimum *dispatchable load* capacity, of 1 MW, or for an *electricity storage resource* an ability to inject a minimum of 1 MW and withdraw a minimum of 1 MW. Individual *generation units, electricity storage units* or sets of *load equipment* may be aggregated to meet this minimum capacity requirement if they meet the aggregation requirements of section 2.3; and

2.2.6.9 [Intentionally left blank – section deleted]

2.2.6.10 for any *resources* associated with a *cogeneration facility* or *enhanced combined cycle facility* choosing to be either a *dispatchable* or *self-scheduling generation resource*, and the *registered market participant* wishes the compliance bands used to determine whether or not the *resource* is in compliance with its *dispatch instructions* or its current schedule, information as outlined in the applicable *market manual* concerning the impact that the production or supply of the other forms of useful *energy* within the *facility* has on *energy* production. The *IESO* may audit this information, which is to be used to determine appropriate compliance bands as outlined in section 3.3.8, at any time.

2.2.6A A *registered market participant* for a hydroelectric *generation resource* may submit, in addition to any relevant documentation that the *IESO* may request, the following *resource*-specific information as applicable:

2.2.6A.1 *forbidden regions*;

2.2.6A.2 a *start indication value*. A *registered market participant* that elects to submit a *start indication value* shall provide one or more *start indication values* not exceeding the number of *generation units* associated with the *resource*;

2.2.6A.3 whether it intends to submit *hourly must run*;

2.2.6A.4 *forebay* and any associated *time lags*.

2.2.6B A *registered market participant* for a *dispatchable generation resource* shall submit to the *IESO* the *minimum loading point*, the *minimum generation block run-time*, and the *minimum run-time* for the *generation resource* if the *minimum loading point* for the *resource* is greater than zero MW and if the *minimum generation block run-time* for the *resource* is greater than one hour.

~~2.2.6B.1 [Intentionally left blank – section deleted]~~

~~2.2.6B.2 [Intentionally left blank – section deleted]~~

~~2.2.6B.3 [Intentionally left blank – section deleted]~~

2.2.6C [Intentionally left blank – section deleted]

2.2.6D The *IESO* may request, and the *registered market participant* for a *dispatchable generation resource* or a *dispatchable electricity storage resource* shall submit to the *IESO*, the following information:

2.2.6D.1 *start-up time*; and

2.2.6D.2 minimum shut-down time.

2.2.6E If no *resource* specific data is submitted to the *IESO* for a *generation resource's minimum loading point*, *forbidden regions*, or *period of steady operation* in accordance with sections 2.2.6A, and 2.2.6B, the *IESO* shall assign default values of zero for that data.

2.2.6F If *resource* specific data is submitted to the *IESO* in accordance with sections 2.2.6A, 2.2.6B or 2.2.6G the *IESO* shall respect the data as submitted in its determination of the *day-ahead schedule* in accordance with section 4A~~Chapter 7A~~, the *pre-dispatch schedule* in accordance with section 5~~4BA of Chapter 7~~, and the *real-time schedule* in accordance with section 6~~4EA of Chapter 7~~.

2.2.6G In accordance with the applicable *market manuals*, a *registered market participant* that operates a *combined cycle plant* that is composed of *generation resources* that are not aggregated under section 2.3 shall submit to the *IESO*:

2.2.6G.1 the required data for each *resource* associated with that *combined cycle plant*, including the steam turbine *resource's minimum loading point*; and

2.2.6G.2 if the *registered market participant* intends to designate any *resources* associated with its non-aggregated *combined cycle plant* as a *pseudo-unit,* the required data for that *pseudo-unit* including the *steam turbine percentage share* and *duct firing 10-minute operating reserve capability*.

2.2.6H [Intentionally left blank – section deleted]

2.2.6I Subject to section 2.2.6G, the *IESO* shall determine, in accordance with the applicable *market manual*, the *pseudo-unit* technical parameters based on the *resource* specific data submitted under section 3.

2.2.6J [Intentionally left blank – section deleted]

2.2.6K A *registered market participant* for a *dispatchable generation resource* shall submit to the *IESO*:

2.2.6K.1 the *elapsed time to dispatch*; and

2.2.6K.2 *period of steady operation*.

2.2.7 To use a *boundary entity* and its associated *boundary entity resources*, a valid *interconnection agreement* over the relevant *interconnection* must have been entered into prior to the approval of the request. In addition, the information required to use the *boundary entity resources* shall include, but not be limited to:

2.2.7.1 identification of the *intertie* ~~*RWM*~~*registered wholesale meter(s)* through which the *physical services* will be delivered to or withdrawn from the *IESO-controlled grid*, which shall determine the *intertie zone* within which the *boundary entity* is deemed to be located;

2.2.7.2 information confirming that the *market participant* authorized to submit *dispatch data* with respect to the *boundary entity resource* holds all licences, permits or other authorizations that may be required to permit such *market participant* to deliver or withdraw the *physical services* to or from the *intertie zone* within which the *boundary entity resource* is deemed to be located;

2.2.7.3 information demonstrating compliance with applicable requirements of all relevant *standards authorities* and completion of the necessary *transmission service* arrangements with affected *control areas*;

2.2.7.4 the identity of the *market participant* authorized to submit *dispatch data* with respect to the *boundary entity resource*; and

2.2.7.5 information defining the maximum quantities of each *physical service* that the *market participant* authorized to submit *dispatch data* in respect of the *boundary entity resource* is entitled to inject into or withdraw from the *IESO-controlled grid* in respect of the *boundary entity resource* including, where relevant, the trade-off functions among *energy* and *operating reserves.*

2.2.8 In addition to the information required by section 2.2.6 or 2.2.7, as the case may be, the registration information for a *resource* that will provide *operating reserves* shall

include information in a form approved by the *IESO* demonstrating the ability of the *resource* to:

2.2.8.1 provide *energy* and *operating reserve~~s~~* according to the trade-off functions described in, and with the *response* times indicated in, the registration information; and

2.2.8.2 deliver, when the *resource* is called upon to do so by the *IESO*, *energy* at the specified rate (in MWh/hour or MW) in accordance with its *operating reserve offer* for at least one hour.

2.2.9 A *market participant* may request to register as a *self-scheduling generation facility* any *generation facility*:

2.2.9.1 that has a name-plate rating of individual components of equipment that collectively adds up to 1 MW or more but is less than 10 MW; or

~~2.2.9.2 that is a *commissioning generation facility* of any name-plate rating and that is sought to be registered pursuant to section 2.2A.1; or~~

2.2.9.2~~3~~ that is a *cogeneration facility* or *enhanced combined cycle facility* that has a name plate rating of individual components of equipment that collectively adds up to 10 MW or more provided that the *IESO* determines that there are no adverse impacts on the *reliable* operation of the *IESO-controlled grid* of the *facility* being registered as a *self-scheduling generation facility* .

2.2.9A Except as the *IESO* may authorize under section 21.3.2, a *market participant* may request to register a *facility* and any associated *resources* as a *self-scheduling electricity storage facility* if:

2.2.9A.1 the *facility* is comprised of individual *electricity storage units* with *electricity storage unit sizes* that collectively add up to a total *electricity storage facility size* of 1 MW or more but less than 10 MW and meets the condition of section 2.1.3.4.~~; or~~

~~2.2.9A.2 the *facility* is a *commissioning electricity storage facility* of any capacity and that is sought to be registered pursuant to section 2.2D.~~

2.2.10 A *self-scheduling generation facility* may be registered:

2.2.10.1 to provide *energy* and *reactive support service* and *voltage control service*; and

2.2.10.2 as a *certified black start facility*.

2.2.11 The *IESO* shall approve a request for registration as a *self-scheduling generation facility* or a *self-scheduling electricity storage facility* if the information required by this section 2.2 is provided and the *IESO* determines that ~~*self-scheduling*~~the

participation of ~~the *facility*~~those *facilities* and ~~any associated~~ *resources* will not have a material adverse effect on power system *security*.

2.2.12 A *self-scheduling generation facility* or a *self-scheduling electricity storage facility* whose request for *facility* registration has been approved by the *IESO* is a *facility* with associated *resources* registered by the *IESO*.

2.2.13 A *market participant* may apply to register a *generation facility* associated with an *intermittent generation resource*, if it has a name-plate rating of not less than 1 MW.

2.2.14 A *generation facility* associated with an *intermittent generation resource* may not be registered to provide any *physical service* other than *energy* and *reactive support service* and *voltage control service*.

2.2.15 The *IESO* shall approve a request under section 2.2.13 if the information required by this section 2.2 is provided and the *IESO* determines that intermittent operation of the *resource* will not have a material adverse impact on power system *security*.

2.2.16 An *intermittent generator* whose request for *facility* registration has been approved by the *IESO* is a *facility* with associated *resources* registered by the *IESO*.

2.2.17 For the purposes of this Chapter, a *distribution system connected* to the *IESO-controlled grid* must be a *facility* that is registered by the *IESO*.

2.2.18 The *IESO* shall develop procedures and requirements for registering a *distribution system*. Such procedures shall include, but not be limited to, the certifications referred to in sections 2.2.3.3 and 2.2.3.4 and the testing and inspection referred to in section 2.2.3.5.

2.2.19 A *market participant* for a *load resource* may request to change ~~its~~that *resource's* load participation type ~~*resource* type~~ as either a *dispatchable load*, *non-dispatchable load*, or *price responsive load* as follows:

2.2.19.1 a request to change from a *non-dispatchable load* to a *dispatchable load* shall be submitted at least 180 calendar days~~six months~~ prior to the effective date of the change;

2.2.19.2 a request to change from a *non-dispatchable load* to a *price responsive load* shall be submitted at least 75 calendar days~~one month~~ prior to the effective date of the change; ~~and~~

2.2.19.3 a request to change from a *dispatchable load* or *price responsive load* to a *non-dispatchable load* shall be submitted at least 75 calendar days~~seven *business days*~~ prior to the effective date of the change;~~.~~

2.2.19.4 a request to change from a *dispatchable load* to a *price responsive load* shall be submitted at least 75 calendar days prior to the effective date of the change; and

2.2.19.5 a request to change from a *price responsive load* to a *dispatchable load* shall be submitted at least 180 calendar days prior to the effective date of the change.

2.2.20 Once the change to a *non-dispatchable load* takes effect in accordance with ~~sub~~section 2.2.19~~25~~.3, the *market participant* shall not change ~~its~~ that *resource's* load participation type ~~*resource* type~~ back to a *dispatchable load* or a *price responsive load* in accordance with ~~sub~~sections 2.2.19~~25~~.1 or 2.2.19~~25~~.2, as the case may be, for at least ~~12 months~~180 calendar days from the effective date of the change.

2.2.21 A *registered market participant* for a *generation resource* shall be eligible for the real-time generator offer guarantee or day-ahead generator offer guarantee if, as part of the registration process under this section 2.2, the *market participant* provides the *resource* specific information ~~as further specified in Chapter 9~~required for a *GOG-eligible resource*.

2.2A Registration of Commissioning Generation Facilities

2.2A.1 A *market participant* may apply to register a *commissioning generation facility* ~~as a *self-scheduling generation facility*~~, in accordance with section 2.2, for the purpose of being permitted to convey electricity or a *physical service* into, through or out of the *integrated power system* or of participating in the *real-time market*~~s~~ during the period in which the *commissioning generation facility* is undergoing the commissioning tests referred to in section 2.2A.4.

2.2A.2 The *IESO* shall approve an application ~~for *facility* registration of~~to register a *commissioning generation facility* ~~as a *self-scheduling generation facility*~~ if ~~it~~the *IESO* is satisfied that the *commissioning generation facility* meets the requirements ~~of~~provided by section 2.2 ~~have been met~~applicable to *generation facilities* associated with a *self-scheduling generation resource* . Any such registration shall expire upon completion by the *commissioning generation facility* of the final commissioning test submitted to and approved by the *IESO* pursuant to section 2.2A.4.

2.2A.3 Upon expiry of the registration referred to in section 2.2A.2, a *market participant* shall not participate in the *day-ahead market* or *real-time market* nor cause or permit electricity or any *physical service* to be conveyed into, through or out of the *integrated power system* in respect of a former *commissioning generation facility* unless such former *commissioning generation facility* has been registered ~~as a *generation facility*~~, other than pursuant to this section 2.2A, in accordance with section 2.2.

2.2A.4 Where a *commissioning generation facility* has been registered by the *IESO* pursuant to section 2.2A.2, the *market participant* for that *commissioning generation facility* shall, while such registration is in effect:

2.2A.4.1 ensure that the *commissioning generation facility*:

a. complies with all of the provisions of these *market rules* applicable to *self-scheduling generation resources* and associated *generation facilities*; and

b. notwithstanding section 2.2A.4.1(a), where it will seek to be registered~~,~~ other than pursuant to this section 2.2A, in accordance with section 2.2 as other than a *self-scheduling generation resource* and associated *generation facility*, complies with all of the applicable requirements of section 2.1.1.4 and ~~section~~ MR Ch.4 s.7.3 ~~of Chapter 4~~; and

2.2A.4.2 submit to the *IESO*, for approval and in accordance with section 2.2A.5, information detailing the commissioning test plans for the *commissioning generation facility*.

2.2A.5 The detailed commissioning test plans, referred to in section 2.2A.4.2 shall be submitted to the *IESO* for approval and shall be scheduled in accordance with the procedures applicable to the *outage* coordination process described in section 6 of Chapter 5 and with any applicable *market manual* and shall include, but not be limited to:

2.2A.5.1 the time required for the *commissioning generation facility* to synchronize to and de-synchronize from the *IESO-controlled grid*;

2.2A.5.2 *energy* and reactive output levels;

2.2A.5.3 the timing of and ramp rates associated with changes in *energy* and reactive output levels; and

2.2A.5.4 run-back or trip tests for the *commissioning generation facility*.

2.2A.6 Except as otherwise provided in this section 2.2A, where a *commissioning generation facility* has been registered by the *IESO* pursuant to section 2.2A.2, the *IESO* shall, while such registration is in effect, treat the *commissioning generation facility* as ~~one or more~~a *self-scheduling generation resource~~s~~* for all purposes under these *market rules* including, but not limited to, the submission of *dispatch data* and *settlement*.

2.2B [Intentionally left blank – section deleted]

~~2.2B.1 [Intentionally left blank – section deleted]:~~

~~2.2B.1.1 [Intentionally left blank – section deleted];~~

~~2.2B.1.2 [Intentionally left blank – section deleted]~~

~~2.2B.1.3 [Intentionally left blank – section deleted];~~

~~2.2B.1.4 [Intentionally left blank – section deleted]:~~

~~2.2B.1.4A [Intentionally left blank – section deleted]~~

~~2.2B.1.4B [Intentionally left blank – section deleted]~~

~~2.2B.1.4C [Intentionally left blank – section deleted].~~

~~2.2B.2 [Intentionally left blank – section deleted].~~

~~2.2B.3 [Intentionally left blank – section deleted].~~

~~2.2B.4 [Intentionally left blank – section deleted]:~~

~~2.2B.4.1 [Intentionally left blank – section deleted]~~

~~2.2B.4.2 [Intentionally left blank – section deleted];~~

~~2.2B.5 [Intentionally left blank – section deleted].~~

~~2.2B.6 [Intentionally left blank – section deleted].~~

2.2C [Intentionally left blank – section deleted]

~~2.2C.1 [Intentionally left blank – section deleted]:~~

~~2.2C.1.1 [Intentionally left blank – section deleted];~~

~~2.2C.1.2 [Intentionally left blank – section deleted];~~

~~2.2C.1.3 [Intentionally left blank – section deleted];~~

~~2.2C.1.4 [Intentionally left blank – section deleted]~~

~~2.2C1.5 [Intentionally left blank – section deleted].~~

~~2.2C.2 [Intentionally left blank – section deleted]~~

2.2D Registration of Commissioning Electricity Storage Facilities

2.2D.1 A *market participant* may apply to register a *commissioning electricity storage facility* ~~as a *self-scheduling electricity storage* facility~~, in accordance with section 2.2, for the purpose of being permitted to convey electricity or a *physical service* into, through or out of the integrated power system or of participating in the *real-time market*~~s~~ during the period in which the commissioning *electricity storage facility* is undergoing the commissioning tests referred to in section 2.2D.4.

2.2D.2 The *IESO* shall approve an application ~~for *facility* registration of~~ to register a commissioning *electricity storage facility* ~~as a *self-scheduling electricity storage facility*~~ if ~~it is~~the *IESO* is satisfied that the *commissioning electricity storage facility* meets the requirements ~~of~~provided by section 2.2 ~~have been met~~applicable to *electricity storage facilities* associated with a *self-scheduling electricity storage*

resource. Any such registration shall expire upon completion by the commissioning *electricity storage facility* of the final commissioning test submitted to and approved by the *IESO* pursuant to section 2.2D.4.

2.2D.3 Upon expiry of the registration referred to in section 2.2D.2, a *market participant* shall not participate in the *day-ahead market* or *real-time market* nor cause or permit electricity or any *physical service* to be conveyed into, through or out of the *integrated power system* in respect of a former *commissioning electricity storage facility* unless such former *commissioning electricity storage facility* has been registered ~~as an *electricity storage facility*~~, other than pursuant to this section 2.2D, in accordance with section 2.2.

2.2D.4 Where a *commissioning electricity storage facility* has been registered by the *IESO* pursuant to section 2.2D.2, the *market participant* for that *commissioning electricity storage facility* shall, while such registration is in effect:

2.2D.4.1 ensure that the *commissioning electricity storage facility*:

a. complies with all of the provisions of these *market rules* applicable to *self-scheduling electricity storage resources* and associated *electricity storage facilities*; and

~~b.~~ b. notwithstanding section 2.2D.4.1(a), where it will seek to be registered~~,~~ other than pursuant to this section 2.2D, in accordance with section 2.2 as other than a *self-scheduling electricity storage resource* and associated *electricity storage facility*, complies with all of the applicable requirements of section 2.1.1.4 and ~~section~~ MR Ch.4 s.7.3 ~~of Chapter 4~~; and

2.2D.4.2 submit to the *IESO*, for approval and in accordance with section 2.2D.5, information detailing the commissioning test plans for the *commissioning electricity storage facility*.

2.2D.5 The detailed commissioning test plans, referred to in section 2.2D.4.2 shall be submitted to the *IESO* for approval and shall be scheduled in accordance with the procedures applicable to the *outage* coordination process described in section 6 of Chapter 5 and with any applicable *market manual* and shall include, but not be limited to:

2.2D.5.1 the time required for the *commissioning electricity storage facility* to synchronize to and de-synchronize from the *IESO-controlled grid*;

2.2D.5.2 *energy* and reactive output levels;

2.2D.5.3 the timing of and ramp rates associated with changes in *energy* and reactive output levels; and

2.2D.5.4 run-back or trip tests for the *commissioning electricity storage facility*.

2.2D.6 Except as otherwise provided in this section 2.2D, where a *commissioning electricity storage facility* has been registered by the *IESO* pursuant to section 2.2D.2, the *IESO* shall, while such registration is in effect, treat the *commissioning electricity storage facility* as ~~one or more~~ a *self-scheduling electricity storage resources* for all purposes under these *market rules* including, but not limited to, the submission of *dispatch data* and *settlement*.

2.3 Aggregated Generation Units, Electricity Storeage Units or Sets of Load Equipment as Resources

2.3.1 A *market participant* may request ~~to~~that the *IESO* ~~to~~ aggregate several of its *resources* associated with either *generation units, electricity storage units* or sets of *load equipment*, respectively, for one or more of the following purposes: (i) participating in the *day-ahead market*; or (ii) delivering or withdrawing one or more *physical services* in the *real-time market*, or the *procurement markets*. Upon *IESO* approval, the aggregated *resources* associated with either *generation units, electricity storage units* or sets of *load equipment* shall, except as specifically stated in the registration information or the *IESO*'s approval of the aggregation, be treated as a single *resource*:

2.3.1.1 either for the provision or withdrawal of the approved *physical services* by the *registered market participant* for purposes of the submission of *dispatch data*; and

2.3.1.2 by the *IESO*, for purposes of the scheduling and *dispatch* processes described in this Chapter.

~~2.3.1A [Intentionally left blank – section deleted]~~

~~2.3.1A.1 [Intentionally left blank – section deleted]~~

~~2.3.1A.2 [Intentionally left blank – section deleted]~~

2.3.2 The *IESO* shall approve a request for the aggregation of *resources* associated with either *generation units, electricity storage units* or sets of *load equipment* into a single *resource* unless:

2.3.2.1 the registration information for the *resources* associated with either *generation units, electricity storage units* or sets of *load equipment* proposed to be aggregated fails to satisfy the conditions of section 2.2;

2.3.2.2 the registration information fails to demonstrate one or more of the following in respect of the *resources* associated with either *generation units, electricity storage units* or sets of *load equipment* proposed to be aggregated;

a. that they are all located within the *IESO control area*;

b. subject to section 2.3.2A, that they are all *connected* to the *IESO-controlled grid* at the same *connection point*;

c. that the *resource* is under the operational control of a single *market participant* and that such *market participant* is authorized to submit *dispatch data* for it;

d. that operational communication between each of them and the *IESO* meets all applicable standards and protocols; or

e. that they all have relevant metering systems to be used for *settlements* purposes that satisfy the requirements of MR Ch.~~apter~~ 6; or

2.3.2.3 one or more of the *resources* associated with *generation units*, *electricity storage units* or sets of *load equipment* proposed to be aggregated is or includes a *resource*:

a. whose *offer* or *bid* information or whose in-service or out-of-service status affects the numerical value of operating *security limits* in any manner;

b. whose *offer* or *bid* information or whose in-service or out-of-service status is information required by the *IESO* for conducting detailed *security* and *resource* adequacy assessment;

c. whose *offer* or *bid* information or whose in-service or out-of-service status is information required to be submitted to the *market assessment unit* or the *market surveillance panel* in furtherance of their respective functions and obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998* and these *market rules*; or

d. whose *offer* or *bid* information, or whose in-service or out-of-service status or other information is required by *applicable law*, by *licence*, by the *Ontario Energy Board* or by a *standards authority* to be submitted to or obtained by the *IESO*.

2.3.2.4 the *market participant* fails to provide the certification referred to in section 2.2.3.3 in respect of any of the *facilities*;

2.3.2.5 the *market participant* fails to provide the certification referred to in section 2.2.3.4 in respect of any of the *facilities*; or

2.3.2.6 the *market participant* fails to successfully complete the testing or to permit the inspection referred to in section 2.2.3.5 in respect of any of the *facilities.*

2.3.2A Notwithstanding section 2.3.2.2b, the *IESO* may approve a request for the aggregation of *resources* associated with either *generation units, electricity storage*

units or sets of *load equipment* into a single *resource* that are not all *connected* to the *IESO-controlled grid* at the same *connection point*, provided that, in the sole judgement of the *IESO*, they can be represented as a single point of injection or withdrawal without compromising the *reliability* of the *IESO-controlled grid*. Aggregation for the purposes of calculating *transmission service charges* is specified in the then current *Ontario Energy Board* Transmission Rate Order.

2.3.3 If a proposed aggregation of *resources* meets one or more of the above conditions, the *IESO:*

2.3.3.1 shall provide to the *market participant* whose application is denied the reasons for such denial.

~~2.3.3.2 [Intentionally left blank]~~

~~2.3.3.3 [Intentionally left blank]~~

2.3.4 Approval of the aggregation of *resources* shall be withdrawn by the *IESO* where, for any reason, one or more of the aggregated~~ion~~ ~~*facilities*~~ *resources* commences to meet any one or more of the conditions described in section 2.3.2. The *IESO* shall give notice of the withdrawal to the *market participant* authorized to submit *dispatch data* in respect of the aggregated *resources* and shall cease to treat those *resources* as a single *resource* as of the date and time specified in the notice for such purpose. The date and time so specified shall not be less than ~~2~~two days from the date and time at which the notice of withdrawal is given to the *market participant*. If the *market participant* subsequently wishes to thereafter re-aggregate the *resources*, it shall be required to re-apply to the *IESO* for approval of the aggregation in accordance with section 2.3.1.

2.3.5 A *market participant* authorized to submit *dispatch data* for aggregated *resources* may give notice to the *IESO* that it no longer wishes to aggregate those *resources*. The *IESO* shall acknowledge receipt of the *market participant's* notice and shall cease to treat those *resources* as a single *resource* as of the date and time specified in the acknowledgement of receipt for that purpose. The date and time so specified shall be as soon as reasonably practicable following the date of receipt by the *IESO* of the *market participant's* notice. If the *market participant* subsequently wishes to re-aggregate the *resources*, it shall be required to submit a new request to the *IESO* for approval of the aggregation in accordance with section 2.3.1.

2.4 De-registration of Facilities

2.4.1 A *market participant* that wishes to de-register a *facility* and any associated *resources* that have been registered in accordance with this section 2, other than a *boundary entity resource*, which is being removed from service, shall file with the *IESO* a notice of request to de-register in such form as may be specified by the *IESO;* provided, however, that a *market participant* shall not be entitled to file such a notice if it is no longer the beneficial owner of the *facility*.

2.4.2 Within ten *business days* of the date of receipt of the notice referred to in section 2.4.1, the *IESO* shall notify the *market participant* and the *transmitter* to whose *transmission system* the *facility* is *connected* as to whether the *IESO* requires a technical assessment of the impact of the removal from service of the *registered facility* on the *reliability* of the *IESO-controlled grid* and, if so, of the expected date of completion of such assessment. Such date shall not be more than 45 days from the date of issuance by the *IESO* of such notice or such later date as may be agreed between the *IESO* and the *market participant*.

2.4.3 Where the notice issued by the *IESO* pursuant to section 2.4.2 indicates that the *IESO* does not require a technical assessment or where the *IESO* conducts a technical assessment and concludes the removal from service of the *facility* will not or is not likely to have an unacceptable impact on the *reliability* of the *IESO-controlled grid*, the *market participant* shall file with the *IESO* a notice setting forth the date upon which the *market participant* wishes the *IESO* to de-register the *facility*. Such date shall not be less than five *business days* from the date of receipt by the *market participant* of the notice issued by the *IESO* pursuant to section 2.4.2 and, as applicable, shall be subject to the date on which the *facility* has been *disconnected* as confirmed by the relevant *transmitter* to the *IESO*.

2.4.4 Where section 2.4.3 applies, the *IESO* shall:

2.4.4.1 if the *facility* is not *connected* to the *IESO-controlled grid*, de-register the *facility* promptly upon completion of the technical assessment if applicable, or as of the date specified in the notice filed by the *market participant* pursuant to section 2.4.3, whichever is the later, and shall so notify the *market participant*, the *metering service provider* for the *metering installation* that relates to the *registered facility,* and any *market participant* within which the *registered facility* is embedded; or

2.4.4.2 if the *facility* is connected to the *IESO-controlled grid*:

a. issue to the relevant *transmitter* a *disconnection order* directing the relevant *transmitter* to *disconnect* the *facility* from the *IESO-controlled grid* on the date specified in the *disconnection order* which shall be no earlier than the date specified in the notice filed by the *market participant* pursuant to section 2.4.3; and

b. de-register the *facility* as of the date on which the relevant *transmitter* confirms to the *IESO* that the *facility* has been *disconnected* from the *IESO-controlled grid*.

and shall notify the *market participant* accordingly.

2.4.5 Where the *IESO* conducts the technical assessment referred to in section 2.4.2 and concludes that the removal from service of the *facility* will or is likely to have an unacceptable impact on the *reliability* of the *IESO-controlled grid,* the *IESO* and the *market participant* shall commence the process described in sections 9.6 and 9.7 and in ~~section~~ MR Ch.5 s.4.8 ~~of Chapter 5~~ with a view to concluding a *reliability must-run*

contract for that *facility*. The *facility* shall not be removed from service during the course of such process.

2.4.6 [Intentionally left blank – section deleted]

2.4.6.1 [Intentionally left blank – section deleted]

2.4.6.2 [Intentionally left blank – section deleted]

2.4.7 A *transmitter* that receives a *disconnection order* from the *IESO* pursuant to section 2.4.4.2(a) shall:

2.4.7.1 subject only to ~~section~~ MR Ch.5 s.3.4.1.5 ~~of Chapter 5~~ and to the completion of any operating and decommissioning procedures contemplated in the *connection agreement* applicable to the *facility*, *disconnect* the *facility* from the *IESO-controlled grid* on the date and at the time specified in the *disconnection order*; and

2.4.7.2 promptly inform the *IESO* once the *facility* has been *disconnected* from the *IESO-controlled grid.*

Planned Retirements of Generation and Electricity Storage Facilities

2.4.8 Each *generator* shall provide the *IESO* not less than six months advance notice of the commencement of the planned retirement of any one of its *generation facilities* and any associated *resources* that have been registered in accordance with this section 2, including notification of any plans the *generator* may have to construct replacement *facilities* for those being retired.

2.4.9 Each *electricity storage participant* shall provide the *IESO* not less than six months advance notice of the commencement of the planned retirement of any one of its *electricity storage facilities* and associated *resources* that have been registered in accordance with this section 2, including notification of any plans the *electricity storage participant* may have to construct replacement *facilities* for those being retired.

2.5 Transfer of Registration of Facilities

2.5.1 A *market participant* that wishes to transfer the registration of a *facility* and any associated *resources* that has been registered in accordance with this section 2*,* as a result of the proposed transfer of the *facility* to another person by sale, assignment, lease, transfer of control or other means of disposition shall, not less than 10 *business days* prior to the date on which the transfer is proposed to take effect, file with the *IESO* and the relevant *transmitter* or *distributor*, a notice of request to transfer the registration of the *facility* in such form as may be specified by the *IESO*. Such notice shall specify:

2.5.1.1 the identity of the transferee and whether the transferee is or intends to be a *market participant*; and

2.5.1.2 the date upon which the transfer is proposed to take effect,

and shall be accompanied by a written declaration by the proposed transferee that it is willing and able to assume control of the *facility* and any associated *resources* and to comply with all provisions of these *market rules* and of any *reliability must-run contract* or *contracted ancillary services* contract applicable to such *facility.*

2.5.2 If the proposed transferee satisfies or is capable of satisfying the requirements of section 2.2, the *IESO* shall approve a request to transfer the registration of a *facility* and any associated *resources* unless the proposed transferee is a *suspended market participant* or is otherwise ineligible under these *market rules* to be a *market participant*.

2.5.3 Where the *IESO* approves a request to transfer the registration of a *facility*, the *IESO* shall transfer the registration of the *facility* to the proposed transferee:

2.5.3.1 on the date referred to in section 2.5.1.2, provided that the proposed transferee was a *market participant* at the time of filing of the notice referred to in section 2.5.1 and remains a *market participant* on such date; or

2.5.3.2 on such later date as may reasonably be required to permit the *IESO* to effect the transfer following the later of the date of authorization of the proposed transferee as a *market participant* and the date on which the proposed transferee meets the requirements of section 2.2.

2.5.4 Upon completion of the transfer of the *facility*, the proposed transferee will have to post with the *IESO prudential support* or *capacity prudential support* as applicable, equal to the proposed transferee's *prudential support obligation* or *capacity prudential support obligation*. Until the proposed transferee has done so, the transferring *market participant* shall continue to be liable for the obligations of the proposed transferee in the *IESO-administered markets*. Such obligations shall include, without limitation, the cost of electricity withdrawn from the *IESO-controlled grid* by the proposed transferee and related charges as determined by the *IESO* in accordance with MR Ch.~~apter~~ 9. The *prudential support obligation* and/or *capacity prudential support obligation* as applicable of the transferring *market participant* shall include all such amounts whether or not the transferring *market participant* has complied with the provisions of this section 2.5.

3. Data Submissions for the Day-Ahead Market and the Real-Time Markets

Note: Section 3 has been substantially amended and reorganized. For ease of review certain sections are displayed without tracked changes.

Note: Sections 3.1 – 3.3.3 – Without Tracked Changes

3.1 General Dispatch Data Submission Requirements

Dispatch Data Submission Process

3.1.1 Each *registered market participant* shall submit its *dispatch data* to the *IESO* through the *electronic information system* or, when not available, by such alternative means and/or in such alternative simplified form as may be specified by the *IESO* pursuant to section 3.1.2.3.

3.1.2 The *IESO* shall:

3.1.2.1 stamp all *dispatch data* with the time that it was received by the *IESO*;

3.1.2.2 within five minutes, confirm receipt of all such *dispatch data* through the *electronic information system*; and

3.1.2.3 specify alternative means and/or an alternative simplified form of submitting and confirming *dispatch data* when the *electronic information system* is unavailable.

3.1.3 *Dispatch data* submitted on a *resource* with the latest time stamp shall replace any *dispatch data* previously submitted on the *resource* for the corresponding *dispatch day* or *dispatch hour*, subject to section 3.1.4.

3.1.4 The *IESO* may reject any *dispatch data* that does not comply with this section 3 and shall provide to the *registered market participant* submitting such rejected *dispatch data* the reasons for such rejection. Nothing in section 3.1.4 shall limit the *IESO*'s rights under section 22.13.1 or shall be construed as an *IESO* determination under MR Ch.3 s.6.

3.1.4A For the purposes of this section 3, where the *IESO* has approved the submission of *dispatch data,* such approval shall not be construed as the *IESO's* determination that the *dispatch data* is compliant with any applicable obligations under these *market rules,* and shall not prejudice the *IESO's* rights or remedies under MR Ch.3 s.6.

3.1.5 A *registered market participant* that does not receive from the *IESO* confirmation of receipt of *dispatch data* in accordance with section 3.1.2.2 shall immediately contact the *IESO* by telephone or facsimile seeking confirmation of receipt.

3.1.6 A *registered market participant* shall, if requested by the *IESO*, resubmit *dispatch data* by such means as may be specified by the *IESO* in the request.

3.1.7 For the purposes of this section 3, *dispatch data* that is submitted to the *IESO* through the electronic information system or by other means and that the *IESO* has rejected pursuant to section 3.1.4, or is otherwise not valid, shall be deemed not to have been submitted to the *IESO*.

3.1.8 *Dispatch data* submitted during the *dispatch day* to which it applies shall only be submitted for the remaining *dispatch hours* of that *dispatch day.*

General Submission Requirements

3.1.9 A *registered market participant* shall submit *dispatch data* in the *day-ahead market* or *real-time market*, as may be permitted under this section 3, to be eligible for *dispatch* or to otherwise provide *physical services.*

3.1.10 *Dispatch data* submitted in the *day-ahead market* in accordance with section 3.2 shall be used as a *dispatch data* submission into the *real-time market* where applicable, unless the *dispatch data* is subsequently resubmitted or revised.

Establishing an Availability Declaration Envelope

3.1.11 A *registered market participant* that intends for its *dispatchable generation resources*, *dispatchable electricity storage resources*, *dispatchable loads*, or *hourly demand response resources* to be eligible for *dispatch* by the *IESO* for a given *dispatch hour* of a *dispatch day* shall establish an *availability declaration envelope* by submitting a *bid* or *offer*, as applicable, for *energy* in the *day-ahead market* in accordance with section 3.2.1 on the *resource* for the applicable *dispatch hour*, subject to section 3.1.14.

3.1.12 If a *registered market participant* for a *dispatchable generation resource* or a *dispatchable electricity storage resource* does not establish an *availability declaration envelope*, the *resource* shall not operate in the *real-time market* without the approval of the *IESO* under section 3.1.14.

3.1.13 If a *registered market participant* for a *dispatchable load* or an *hourly demand response resource* does not establish an *availability declaration envelope,* the *resource* shall not operate in the *real-time market* as a *dispatchable load or hourly demand response resource* without the approval of the *IESO* under section 3.1.14, except for the portion of *energy* identified to be consumed as a *non-dispatchable load* in accordance with section 3.3.3.1.

3.1.14 The *IESO* shall approve an increase to the *availability declaration envelope* of a *resource* if:

3.1.14.1 the *resource* returns from *outage* earlier than planned in accordance with the provisions of MR Ch.5 s.6;

3.1.14.2 the *IESO* has solicited additional *offers* or *bids;*

3.1.14.3 the increase will avoid an *emergency operating state* or *high-risk operating state*;

3.1.14.4 the increase is required in order to prevent the *resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*; or

3.1.14.5 the increase does not exceed the materiality threshold specified in the applicable *market manual.*

3.2 Dispatch Data Submissions in the Day-Ahead Market

Submissions During the Day-Ahead Market Submission Window

3.2.1 A *registered market participant* that submits *dispatch data* for the *day-ahead market*, shall submit such *dispatch data* during the *day-ahead market submission window* unless the *registered market participant* has submitted s*tanding dispatch data* in accordance with section 3.3.9. A *registered market participant* may also submit *dispatch data* for the *day-ahead market* during the *day-ahead market restricted window* as permitted by section 3.2.4.

3.2.2 A *registered market participant* may submit revised *dispatch data* into the *day-ahead market* provided that it is submitted during the *day-ahead market submission window* or as permitted by section 3.2.4.

3.2.3 A *registered market participant* for a *dispatchable load* may, in the *dispatch data* submitted under sections 3.2.1 and 3.2.2, identify all or a portion of the *energy* to be consumed at such *resource* as *non-dispatchable load* in accordance with the applicable *market manual*.

Submissions During the Day-Ahead Market Restricted Window

3.2.4 During the *day-ahead market restricted window*, *dispatch data* submissions shall require *IESO* approval in accordance with section 3.2.5.

3.2.5 The *IESO* may approve *dispatch data* submitted during the *day-ahead market restricted window* if the *IESO* is unable to receive *dispatch data* submissions during the *day-ahead market submission window* due to a failure in or *planned outage* of the software, hardware or communications systems that support the submission of *dispatch data*, as determined by the *IESO*.

3.2.6 Subject to section 3.2.4, the *IESO* shall use the most recent *dispatch data* submitted by *registered market participants*, provided that it is received by the *IESO* before 10:00 EPT on each day prior to the relevant *dispatch day*, as inputs into the *day-ahead market calculation engine* in accordance with section 3.

3.3 Dispatch Data Submissions in the Real-Time Market

3.3.1 The *IESO* shall use the following types of *dispatch data* submitted by *registered market participants* to determine the *pre-dispatch schedule* in accordance with section 5 and Appendix 7.5A;

3.3.1.1 *dispatch data* submitted in the *day-ahead market* that has been converted in accordance with section 3.1.10; and

3.3.1.2 *dispatch data* submitted during the *pre-dispatch process*.

3.3.2 For the purposes of this section 3.3, any *dispatch data* submission made during the *pre-dispatch process* on a *resource* for any *dispatch hour* shall be deemed to constitute a revision to *dispatch data* or revised *dispatch data*.

Submissions During the Real-Time Market Unrestricted Window for Hourly Dispatch Data Parameters

3.3.3 Subject to this section 3.3.3, a *registered market participant* may submit revised hourly *dispatch data* parameters described in sections 3.5.3 and 3.5.4 with respect to any *dispatch hour* during the *real-time market unrestricted window*.

3.3.3.1 During the *real-time market unrestricted window,* notwithstanding section 2.2.20, a *registered market participant* may, for any one or more of its *dispatchable loads*, identify all or a portion of the *energy* to be consumed at such *resources* as a *non-dispatchable load* by submitting revised *dispatch data* in accordance with the applicable *market manual*.

3.3.3.2 A *registered market participant* for a *dispatchable load*, *hourly demand response resource* or *dispatchable electricity storage resource* that has established its *availability declaration envelope* may revise its *bid* during the *real-time market unrestricted window* provided that the revised *bid* does not increase the *resource's availability declaration envelope* which, for the avoidance of doubt, excludes the portion of *energy* a *dispatchable load* identified to be consumed as a *non-dispatchable load*. Revised *bids* that seek to increase the *resource's availability declaration envelope* shall require *IESO* approval under section 3.1.14 or in accordance with the applicable *market manual*.

3.3.3.3 Subject to sections 3.3.3.4 to 3.3.3.13, a *registered market participant* for a *dispatchable generation resource* or a *dispatchable electricity storage resource* that has established its *availability declaration envelope* may revise its *offer* during the *real-time market unrestricted window* provided that the revised *offer* does not increase the *resource's availability declaration envelope*. Revised *offers* that seek to increase the *resource's availability declaration envelope* shall require *IESO* approval under section 3.1.14 or in accordance with the applicable *market manual*.

3.3.3.4 During the *real-time market unrestricted window* for *dispatch hours* where a *GOG-eligible resource* has received a *day-ahead operational*

schedule, its *registered market participant* shall not increase its (i) *speed no-load offer*, or (ii) *energy offer* price for quantities up to and including its *minimum loading point*, above the latest *offer* submitted for the corresponding *dispatch hour* under section 3.1.11.

3.3.3.5 Starting at 20:00 EST on the day prior to the relevant *dispatch day*, for *dispatch hours* where a *GOG-eligible resource* has not received a *day-ahead operational schedule*, its *registered market participant* shall not increase its (i) *speed no-load offer*, or (ii) *energy offer* price for quantities up to and including its *minimum loading point*, above the latest offer submitted for the corresponding *dispatch hour*.

3.3.3.6 During the *real-time market unrestricted window*, for *dispatch hours* where a *GOG-eligible resource* has received a *day-ahead operational commitment*, its *registered market participant* shall not increase its *start-up offers* above the latest offer submitted for the corresponding *dispatch hour* under section 3.1.11.

3.3.3.7 Starting at 20:00 EST on the day prior to the relevant *dispatch day,* for *dispatch hours* where a *GOG-eligible resource* has not received a *day-ahead operational commitment*, its *registered market participant* shall not increase its *start-up offers* above the latest *offer* submitted for the corresponding *dispatch hour.*

3.3.3.8 Subject to 3.3.3.9, during *the real-time market unrestricted window*, for *dispatch hours* where a *GOG-eligible resource* (i) has received a *binding pre-dispatch advisory schedule*, and (ii) has not received a *day-ahead operational schedule*, its *registered market participant* shall not increase its *energy offer* prices above *the energy offer* prices submitted for the corresponding *dispatch hour*:

a. used at the time of establishing the *binding pre-dispatch advisory schedule;* and

b. for quantities above the *resource's minimum loading point* and up to and including the quantity scheduled by the *binding pre-dispatch advisory schedule*.

3.3.3.9 The restrictions in section 3.3.3.8 shall not apply in the following circumstances:

a. for the remaining *dispatch hours* of the *binding pre-dispatch advisory schedule* when the *GOG-eligible resource* has received a notice of de-commitment in accordance with section 10.2.1; or

b. for the *dispatch hours* where a steam turbine *resource* associated with a *pseudo-unit* experiences a *forced outage* and the *registered market participant* submits an *outage* slip to the *IESO* for that steam turbine *resource.* Under such circumstances, the *energy offer* price

increase for the *pseudo-unit* shall be limited to the *energy offer reference level* of the *resource* associated with the *single cycle mode* of operation.

3.3.3.10 Subject to 3.3.3.11, during the *real-time market unrestricted window*, for *dispatch hours* where *a GOG-eligible resource* (i) has received a *binding pre-dispatch advisory schedule*, and (ii) has not received a *day-ahead operational schedule*, its *registered market participant* shall not increase its *energy offer* prices above the *energy offer* prices submitted for the corresponding *dispatch hour*:

a. used at the time of establishing the *binding pre-dispatch advisory schedule*; and

b. for quantities that exceed the *resource's binding pre-dispatch advisory schedule*.

3.3.3.11 The restrictions in section 3.3.3.10 shall not apply in the following circumstances:

a. for the remaining *dispatch hours* of *the binding pre-dispatch advisory schedule* when the *GOG-eligible resource* has received a notice of de-commitment in accordance with section 10.2.1; or

b. for the *dispatch hours* where a steam turbine *resource* of a *pseudo-unit* experiences a *forced outage* and the *registered market participant* submits an *outage* slip to the *IESO* for that steam turbine *resource.* Under such circumstances, the *energy offer* price increase for the *pseudo-unit* shall be limited to the *energy offer reference level* of the *resource* associated with the *single cycle mode* of operation; or

c. for the *dispatch hours* for which the *IESO* has temporarily revised the *resource's energy offer reference level* in accordance with section 22.5.8, and the following requirements are satisfied:

i. The revision occurs after the *binding pre-dispatch advisory schedule* is published and prior to the *mandatory window;* and

ii. The revision applies to the quantities that exceed the *resource's binding pre-dispatch advisory schedule*.

3.3.3.12 Subject to 3.3.3.13, during the *real-time market unrestricted window*, for *dispatch hours* where *a GOG-eligible resource* (i) has received a *binding pre-dispatch advisory schedule*, (ii) has not received a *day-ahead operational schedule*, and (iii) has submitted an *operating reserve offer*, its *registered market participant* shall not increase its *operating reserve offer* prices above the *operating reserve offer* prices submitted for the corresponding *dispatch hour* used at the time of establishing the *binding pre-dispatch advisory schedule*.

3.3.3.13 The restrictions in section 3.3.3.12 shall not apply:

a. for the remaining *dispatch hours* of the *binding pre-dispatch advisory schedule* when the *GOG-eligible resource* has received a notice of de-commitment in accordance with section 10.2.1; or

b. for the *dispatch hours* where the steam turbine *resource* of a *pseudo-unit* experiences a *forced outage* and the *registered market participant* submits an *outage* slip to the *IESO* for that steam turbine *resource.* Under such circumstances, the *operating reserve offer* price increase for the *pseudo-unit* shall be limited to the *operating reserve offer reference level* of the *resource* associated with the *single cycle mode* of operation.

Note: Section 3.3.4 – Tracked Changes

Replacement Energy Offers – Forced Outage Revisions During the Real-Time Market Unrestricted Window and Mandatory Window

3.3.4~~B~~ A *registered market participant* for a *generation resource* associated with a hydroelectric *generation facility*, a *combined cycle* ~~generation facility~~*plant*, an *enhanced combined cycle facility* or a *cogeneration facility* that experiences a *forced outage* may submit revised *dispatch data* ~~for~~on a related *generation* ~~*facility*~~*resource*, with respect to any *dispatch hour* up until 10 minutes prior to the beginning of that *dispatch hour*. If the revised *dispatch data* is submitted less than 10 minutes prior to the beginning of that *dispatch hour*, the revised *dispatch data* will apply to the subsequent *dispatch hour*. This section is subject to the following conditions:

a. The submission of revised *dispatch data* takes place no later than one hour after the *generation* ~~*facility*~~*resource* experiences the *forced outage* and is limited to the maximum MW amount ~~on~~*offered* by the *generation resource* experiencing the *forced outage.*

b. The *registered market participant* whose *generation* ~~*facility*~~*resource* experienced a *forced outage* notifies the *IESO*, in accordance with the applicable *market manual*, of its intention to submit revised *dispatch data* for the related *generation* ~~*facility*~~*resource* for the next available *dispatch hour* and of its intention to provide replacement *energy* from the related *generation* ~~*facility*~~*resource*.

c. Where the related *generation* ~~*facility*~~*resource* is not synchronized, the *registered market participant* notifies the *IESO* of its intention to synchronize the related *generation* ~~*facility*~~*resource* and the *IESO* determines synchronization

will have no adverse impact on the *reliability* of the *IESO-controlled grid.*

d. The related *generation ~~facility~~resource* and the *generation ~~facility~~resource* experiencing the *forced outage* have the same *registered market participant*.

e. The related *generation ~~facility~~resource* and the *generation ~~facility~~resource* experiencing the *forced outage* have the same *metered market participant*.

3.3.4.1 For the purposes of this section 3.3, r~~R~~elated *generation ~~facilities~~resources* are *generation ~~facilities~~resources* that, in the case of a hydroelectric *generation facility*, can utilize the water of the *generation ~~facility~~resource* experiencing the *forced outage* without delay. In the case of *combined cycle ~~facilities~~plants*, *enhanced combined cycle facilities* or *cogeneration facilities,* related *generation ~~facilities~~resources* are *generation ~~facilities~~resources* that can make up the loss in steam production to the steam turbine *resource~~unit~~* that would otherwise have been produced by the gas turbine *resource~~unit~~* experiencing the *forced outage.*

3.3.4~~C~~.2 In the period after the notification and before the market tools process the revised *dispatch data,* the *IESO* shall ~~accept~~approve the replacement *energy offer* from the related *generation ~~facility~~resource*, provided there is no adverse impact on the *reliability* of the *IESO-controlled grid.* ~~The replacement *energy* delivered shall be limited to the amount of *energy* originally scheduled for the *generating facility* experiencing the *forced outage.*~~ The *market participant* may choose to provide replacement *energy* from a related *generation ~~facility~~resource* without submitting revised *dispatch data* for the current *dispatch hour* or, if within 10 minutes of the next *dispatch hour*, the current and subsequent *dispatch hour*.

3.3.4.3 The related *generation resource* that submits revised *dispatch data* under section 3.3.4 shall not be entitled to the *day-ahead operational commitment, pre-dispatch operational commitment, day-ahead market generator offer* guarantee *settlement amount* or *real-time market generator offer* guarantee *settlement amount* that was received by the *resource* that experienced the *forced outage*.

Note: Section 3.3.5 – Without Tracked Changes

Revisions During the Real-Time Market Mandatory Window for Hourly Dispatch Data Parameters

3.3.5 A *registered market participant* may submit revised hourly *dispatch data* parameters described in sections 3.5.3 and 3.5.4 during the *real-time market mandatory window*, in accordance with the applicable *market manual,* only in circumstances

where it would otherwise be permitted to submit such revised *dispatch data* on the *resource* in the *real-time market unrestricted window* after 20:00 EST on the day prior to the relevant *dispatch day,* provided that the *IESO* approves the submission of such revised *dispatch data*. Notwithstanding the foregoing, the *IESO* shall approve revisions to hourly *dispatch data* during the *real-time market mandatory window* in the following circumstances:

3.3.5.1 the submission of replacement *energy offers* in accordance with section 3.3.4;

3.3.5.2 the submission of revised *dispatch data* due to a *pre-dispatch schedule* that a *resource* reasonably expects to differ in schedule, delivery or withdrawal in accordance with section 3.3.8;

3.3.5.3 the submission of revised *dispatch data* in accordance with section 3.3.11 where the *registered market participant* has been issued a direction by the *IESO* in accordance with 3.3.10.2;

3.3.5.4 the submission of revised *dispatch data* identifying all or a portion of a *dispatchable load's* consumption as a *non-dispatchable load* in accordance with section 3.3.3.1; or

3.3.5.5 the submission of revised *dispatch data* on an *electricity storage resource* in accordance with section 21.5.

Note: Section 3.3.6 – Tracked Changes

3.3.6 Where pursuant to section 3.3.5, the approval of the *IESO* is required for the submission of revised *dispatch data*, the *IESO* shall, unless the change in quantity poses risks in relation to the *reliability* or *security* of the *electricity system*, or, for clarity, otherwise contravenes the requirements under section 3.3.5, approve the submission of revised *dispatch data* where:

~~3.3.6.1 [Intentionally left blank – section deleted]~~

~~3.3.6.2 [Intentionally left blank – section deleted]~~

3.3.6.1~~3~~ ~~the *registered market participant* indicates, at the time of the sub-mission of the revised *dispatch data,* that~~ the revision is required in order to reflect a proposed change in the operational status of the ~~*registered facility*~~*resource* designed solely to prevent the ~~*registered facility*~~*resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*.

The *IESO* may refer such changes or revision of *dispatch data* to the *market surveillance panel*.

Note: Section 3.3.7 – Without Tracked Changes

Revisions During the Real-Time Market Restricted Window for Daily Dispatch Data Parameters

3.3.7 Subject to 3.3.7.1, 3.3.7.2 and 3.3.7.4, during the *real-time market restricted window*, a *registered market participant* may submit revised *dispatch data* for daily *dispatch data* parameters described in sections 3.5.21 and 3.5.22, in accordance with the applicable *market manual,* if the revision is required in order to reflect a proposed change in the operational status of the *resource* designed solely to prevent the *resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*.

3.3.7.1 During the *real-time market restricted window*, a *registered market participant* shall not submit revised *dispatch data* for the following daily *dispatch data* parameters:

a. *minimum loading point*; or

b. *minimum generation block run-time*.

3.3.7.2 Subject to 3.3.7.3, during the *real-time market restricted window*, a *registered market participant* may revise its submission of *single cycle mode* for any reason.

3.3.7.3 During the *real-time market restricted window*, a *registered market participant* shall not revise its submission of *single cycle mode* where:

a) the *pseudo-unit* has received a *day-ahead operational commitment* for any of the remaining hours of the *dispatch day*;

b) the *pseudo-unit* has received a *pre-dispatch operational commitment* for any of the remaining hours of the *dispatch day*; or

c) the *pseudo-unit* is synchronized;

unless the *pseudo-unit* is operating in combined cycle mode, and the associated steam turbine *resource* of the *pseudo-unit* experiences a *forced outage* and the *registered market participant* submits a *forced outage* slip for the steam turbine *resource.*

3.3.7.4 During the *real-time market restricted window*, a *registered market participant* may revise its submission of certain daily *dispatch data* parameters for the reasons prescribed in the applicable *market manual.*

Note: Sections 3.3.8 – 3.3.17 – Tracked Changes

Obligation to Revise Dispatch Data

3.3.8 Notwithstanding any other provision of this section 3.3 and with the exception of testing specified in MR Ch.5 s.~~ection~~ 6.6 ~~of Chapter 5~~, a *registered market participant* shall as soon as practical, submit to the *IESO* revised *dispatch data* for any ~~*registered facility*~~*resource* in respect of which it is the *registered market participant* if, for any *dispatch hour* in the current *pre-dispatch schedule,* the quantity of any *physical service* scheduled for that ~~*registered facility*~~*resource* differs from the quantity the *registered market participant* reasonably expects to be delivered or withdrawn in the *dispatch hour* by more than the greater of:

(i) 2 percent;

(ii) such absolute amount as may be determined by the *IESO* based on considerations of *reliability* and ~~*facility*~~*resource* specific characteristics;

(iii) in the case of a *resource associated* with a *cogeneration facility* that is either a *dispatchable* or *self-scheduling generation* ~~*facility*~~*resource*, such amount based on the impact that the production of the other forms of useful *energy* within the *facility* has on *energy* production based on the information outlined in section 2.2.6.10, and the *IESO*; and

(iv) in the case of a *resource associated* with an *enhanced combined cycle facility* that is either a *dispatchable* or *self-scheduling generation* ~~*facility*~~*resource*, such amount based on the impact that the recovery of waste heat from an industrial process/processes within the *facility* has on *energy* production based on the information outlined in section 2.2.6.10;

and the *IESO*:

3.3.8.1 shall, unless the change in quantity poses risks in relation to the *reliability* or *security* of the *electricity system*, include such change as an input in respect of any subsequent ~~*market schedules*~~schedule determined following receipt of the change; and

3.3.8.2 may refer such changes or revision of *dispatch data* to the *market surveillance panel*.

Standing Dispatch Data

3.3.9 ~~If the dispatch data for a registered facility for a given trading day of a trading week will not change from trading week to trading week, the~~ A *registered market participant* ~~for that registered facility~~ may~~, as and for its dispatch data described in section 3.3.1,~~ submit *standing dispatch data* ~~for that registered facility. Such standing dispatch data~~on a *resource* which shall:

3.3.9.1 define the *dispatch data* for each *dispatch hour* of each *dispatch day*~~;~~, or for the duration of the *dispatch day*;

3.3.9.1A in respect of each *dispatch day* for which it is in effect, be deemed for the purposes of this section 3.3 and section 22 to be ~~initial~~ *dispatch data,* submitted at 06:00 ~~EST~~EPT for the *day-ahead market submission window* on the ~~*pre*~~ day prior to the relevant *dispatch day*; and

3.3.9.2 remain in effect until the expiration date specified in the *standing dispatch data* unless earlier withdrawn or earlier revised by the *registered market participant*:

a. as *standing dispatch data* prior to 06:00 ~~EST~~EPT on the ~~*pre*~~ day prior to the relevant *dispatch day*; ~~or~~

b. as *dispatch data* for the *dispatch day* in accordance with sections 3.3.3 to 3.3.8~~.~~; or

c. as *dispatch data* for the *dispatch day* in accordance with sections 3.2.

IESO Authorities to Direct Submission or Revision of Dispatch Data

3.3.10 Notwithstanding sections 3.3.3, 3.3.4, ~~3.3.4B,~~ 3.3.5, 3.3.7 and 3.3.8, where the *IESO* determines, on the basis of the ~~initial *pre-dispatch*~~*day-ahead schedule* or any subsequent *pre-dispatch schedule* determined in accordance with section 5, that a revision to *dispatch data* will not allow it to maintain the *reliability* of the *IESO-controlled grid*, the *IESO* may, subject to sections 3.3.15 and 3.3.16:

3.3.10.1 refuse to ~~accept~~ permit a revision to the quantity element of *dispatch data* submitted by a *registered market participant*; or

3.3.10.2 direct a *registered market participant* to submit or to resubmit a revision to the quantity element of its *dispatch data*, or both. The *IESO* shall notify the *registered market participant* of a refusal referred to in section 3.3.10.1 and shall include in any direction issued pursuant to section 3.3.10.2 a description of the revised *dispatch data* to be submitted or resubmitted by the *registered market participant*.

3.3.11 A *registered market participant* to which a direction has been issued pursuant to section 3.3.10.2 shall submit revised *dispatch data* to the *IESO* in accordance with the terms of the direction within two~~2~~ hours of the time of receipt of the direction.

3.3.12 If the *IESO* determines, on the basis of the ~~initial *pre-dispatch*~~*day-ahead schedule* or any subsequent *pre-dispatch schedule* determined in accordance with section 5, that it requires the supply of *energy, ancillary services*~~,~~ other than *contracted ancillary services*, or both from additional ~~*registered facilities*~~*resources* in order to maintain the *reliability* of the *IESO-controlled grid*, the *IESO* shall determine if there are additional ~~*registered facilities*~~ *resources* that have not submitted *dispatch data* and that can, to the *IESO's* knowledge, be made available within the time required in order to help maintain the *reliability* of the *IESO-controlled grid*.

3.3.13 Subject to sections 3.3.14 to 3.3.16, the *IESO* may direct the *registered market participant* for an additional ~~*registered facility*~~*resource* identified pursuant to section 3.3.12 to submit *dispatch data*, and shall include in such direction a

description of the *dispatch data* to be submitted by the *registered market participant*.

3.3.14 A *registered market participant* to which a direction is issued pursuant to section 3.3.13 shall submit *dispatch data* to the *IESO* in accordance with the terms of the direction within two~~2~~ hours of the time of receipt of the direction.

3.3.15 The *IESO* shall not issue a direction pursuant to section 3.3.10 or 3.3.13 for the purposes of addressing a lack of overall *adequacy* of the *IESO-controlled grid*.

3.3.16 Where a ~~*registered facility*~~*resource* to which a direction issued pursuant to section 3.3.10.2 or 3.3.13 relates has a *reliability must-run contract* with the *IESO*, any such direction shall, subject to the time period for the submission of *dispatch data* referred to in sections 3.3.11 and 3.3.14, be consistent with the terms of such *reliability must-run contract*.

3.3.17 Nothing in sections 3.3.10 to 3.3.16 shall preclude the application of the provisions of section~~s 7.3.2.3~~22, MR Ch.9 s.5 or of MR Ch.9 App.~~endix 7.6 –~~9.4 in respect of *dispatch data* that is revised or submitted in accordance with sections 3.3.10 to 3.3.16.

~~3.3.18 A *registered market participant* may, for any one or more of its *registered facilities* that is a *dispatchable load*, identify all or a portion of the consumption at such *registered facilities* as *non-dispatchable load* by submitting *dispatch data* in accordance with the applicable *market manual*.~~

~~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, *dispatchable load facility*, dispatchable *electricity storage 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.~~

~~3.3A.3 If a *registered market participant* for a *dispatchable generation facility* or a dispatchable *electricity storage facility* does not provide *dispatch data* in accordance~~

with section 3.3A.2 the *facility* shall not operate in real-time without the approval of the *IESO* under section 3.3A.12.

3.3A.4 A *registered market participant* for a *dispatchable load facility* may, in the *dispatch data* submitted under section 3.3A.2, identify all or a portion of the consumption at such *registered facility* as *non-dispatchable load* in accordance with the applicable *market manual*.

3.3A.5 A *registered market participant* for a *boundary entity* may submit, between 6:00 EST and 10:00 EST of the *pre-dispatch day,* an import *offer* or export *bid* for the next *dispatch day* with a valid NERC tag identifier. If the import *offer* is included in the s*chedule of record* determined under section 5.8, the *registered market participant* will receive the day-ahead *intertie* offer guarantee determined under section 3.8A of Chapter 9.

3.3A.6 R*egistered market participants* that submitted *offers* or *bids* in accordance with either section 3.3A.2 or section 3.3A.5 shall require *IESO* approval to modify those *offers* or *bids* between 10:00 EST and 14:00 EST except for *registered market participants* for:

a. *dispatchable* hydroelectric *generation facilities* which submitted a *daily cascading hydroelectric dependency* in accordance with section 2.2.6K and which are designated by the *IESO* as eligible *energy* limited resources, and

b. physical generation units associated with a *pseudo-unit* designated in accordance with section 2.2.6G.

3.3A.7 [Intentionally left blank – section deleted]

Market Participant Revisions to Dispatch Data

3.3A.8 Subject to sections 3.3A.9, 3.3A.10 and 3.3A.14, after 14:00 EST a *registered market participant* may submit revised *dispatch data* with respect to any *dispatch hour* without restriction until 2 hours prior to the beginning of that *dispatch hour*.

3.3A.9 Subject to sections 3.3A.10 and 3.3A.14, a *registered market participant* for a *dispatchable generation facility* or a dispatchable *electricity storage facility* who did submit *dispatch data* under section 3.3A.2 may revise its *offer* in real-time provided the revised *dispatch data* does not increase the number of hours offered or the offered quantity in any hour relative to the *dispatch data* submitted under section 3.3A.2. Revised *offers* which represent increases to the number of hours offered or increases to the offered quantity relative to the *dispatch data* submitted under section 3.3A.2 will require *IESO* approval. Changes to daily *energy* limits will not require *IESO* approval.

3.3A.10 A *registered market participant* for a *dispatchable generation facility* who was deemed to have accepted the day-ahead production cost guarantee in accordance with section 5.8.4 shall not increase the *offer* price associated with the *minimum loading point* of the *facility*.

~~3.3A.11 *A registered market participant* for a *dispatchable load facility* that declared its intent for all or a portion of its consumption to be non-*dispatchable* under sections 3.3A.2 and 3.3A.4 will require *IESO* approval to increase its declared *bid* quantity and *bid* that consumption in real-time as *dispatchable load*.~~

~~3.3A.12 The *IESO* shall approve increases to declared availability of a *dispatchable facility* if that *generation facility, electricity storage facility* or *dispatchable load facility* returns from outage earlier than planned, or if the *IESO* has solicited additional *offers* and *bids*, or if such increases will avoid an *emergency operating state* or *high risk operating state*, or as permitted under section 3.3.6.3.~~

~~3.3A.13 A *registered market participant* for a *boundary entity* who is eligible to receive a day-ahead *intertie offer* guarantee for an import transaction in accordance with section 3.3A.5 shall not revise the submitted *dispatch data* to link that import transaction to an export transaction as described in section 3.5.8.2 of Chapter 7. If the *IESO* determines that the *dispatch data* was revised by the *registered market participant* in the manner described above, the *IESO* shall recover from the *registered market participant* any day-ahead *intertie offer* guarantee payment for that import transaction and shall redistribute the payment in accordance with chapter 9, section 4.8.2.11.~~

~~3.3A.14 A *registered market participant* for a *dispatchable generation facility* who was deemed to have accepted the day-ahead production cost guarantee in accordance with section 5.8.4 shall be subject to a withdrawal charge as per section 3.8F of Chapter 9 if the *registered market participant* withdraws the *offer* for the *facility.*~~

Note – Section 3.4 – Without Tracked Changes

3.4 The Form of Dispatch Data

3.4.1 *Dispatch data* shall relate to a specified *dispatch hour* or *dispatch day* of the current or next *dispatch day*, as the case may be, and to a specified *resource*, shall comply with sections 3.5 to 3.11, and shall take one of the following forms:

3.4.1.1 for a *dispatchable generation resource*, or a *dispatchable electricity storage resource* proposing to inject *energy*, an *offer* to provide a *physical service* to the appropriate *day ahead-market* or *real-time market*;

a. for a *dispatchable variable generation resource*, an *offer* to provide a *physical service* to the appropriate *day ahead-market* or *real-time market* reflecting the *resource's* full capacity available for production, determined in accordance with the applicable *market manual*.

3.4.1.2 for a *dispatchable load* , or a *dispatchable electricity storage resource* proposing to withdraw *energy*, a *bid* to take *energy* from the *day ahead-market* or *real-time market*;

3.4.1.3 for a *self-scheduling generation resource* or a *self-scheduling electricity storage resource*, a *self-schedule* for the provision of *energy* to the *day ahead-market* or *real-time market* ;

3.4.1.4 for an *intermittent generation resource*, a forecast of *energy* expected to be provided to the *day ahead-market* or the *real-time market*;

3.4.1.5 for a *boundary entity resource*, an *offer* to sell *energy* or a *bid* to purchase *energy* in the *day ahead-market* or the *real-time market;*

3.4.1.6 for a *capacity market participant* with an *hourly demand response resource* or a *capacity dispatchable load resource*, a *demand response energy bid* to reduce its *energy* consumption in the *day ahead-market* or the *real-time market*;

3.4.1.7 for a *price responsive load* or a *self-scheduling electricity storage resource* that intends to withdraw *energy*, a *bid* to purchase *energy* from the *day-ahead market*; and

3.4.1.8 for a *virtual transaction*, an *offer* or *bid* for *energy* on a *virtual zonal resource* in the *day-ahead market*.

3.4.2 Each *offer* for *energy* or *operating reserve* or *bid* for *energy* shall contain prices, each with an associated quantity. A price and the associated quantity in an *offer* or *bid* is a *price-quantity pair* and shall comply with sections 3.5 and 3.6, as applicable, and the following:

3.4.3.1 the quantity in any *price-quantity pair*, other than in the first *price-quantity pair*, shall be an increasing cumulative quantity representing the maximum quantity the *registered market participant* is *offering* to sell or *bidding* to buy, respectively, at the associated price in the *price-quantity pair*;

3.4.3.2 in any *offer*, the price in each *price-quantity pair* must not decrease as the associated quantity increases; and

3.4.3.3 in any *bid*, the price in each *price-quantity pair* must not increase as the associated quantity increases.

3.4.3 Every submission of an *offer* on a *dispatchable generation resource* shall specify a price of *energy* in $/MWh, at and below which the *IESO* may schedule a *generation resource* to zero in the *day-ahead market,* or, in the *real-time market,* instruct a *registered market participant* for the *generation resource* to reduce its *energy* output to zero. Such price represents the lowest price in the *price-quantity* pairs submitted for that *generation resource,* and may be zero or negative but may not be less than the negative *maximum market clearing price*.

3.4.4 Every submission of a *self-schedule* on a *self-scheduling generation resource*, or a forecast of *intermittent generation* for an *intermittent generation resource*, shall specify a price, in $/MWh, at and below which the applicable *registered market participant* reasonably expects to reduce the *energy* schedule in the *day-ahead market* to zero, or, in the *real-time market,* reduce its *energy* output of such *self-scheduling generation resource* or *intermittent generation resource* to zero. Such

price may be zero or negative but may not be less than the negative *maximum market clearing price*.

3.4.5 Every submission of an *offer* for an *electricity storage resource* proposing to inject *energy* shall specify a price of *energy* in $/MWh, at and below which the *IESO* may instruct a *registered market participant* for the *electricity storage resource* to reduce its *energy* schedule in the *day ahead* market to zero, or, in the *real-time* market, reduce its injections to zero. Such price represents the lowest price in the *price-quantity* pairs submitted for that *electricity storage resource,* and may be zero or negative but may not be less than the negative *maximum market clearing price*.

3.4.6 Every submission of a *self-schedule* on a *self-scheduling electricity storage resource* shall specify a price, in $/MWh, at and below which the applicable *registered market participant* reasonably expects to reduce its *energy* schedule in the *day ahead* market to zero or, in the *real-time* market, reduce its injections of *energy* from the *self-scheduling electricity storage resource* to zero. Such price may be zero or negative but may not be less than the negative *maximum market clearing price*.

3.4.7 Every submission of a *bid* on a *dispatchable* load or a *dispatchable electricity storage resource* proposing to withdraw *energy* shall specify a price of *energy*, in $/MWh, at and above which the *IESO* may instruct the *dispatchable load* or *electricity storage resource*, as the case may be, to reduce its *energy* schedule in the *day ahead* market to zero, or, in the *real-time* market, reduce its *energy* withdrawals to zero. Every submission of a *bid* to withdraw energy on a *price responsive load* or a *self-scheduling electricity storage resource* shall specify a price of *energy*, in $/MWh, at and above which the *IESO* may instruct the *price responsive load* or *self-scheduling electricity storage resource* to reduce its *energy* schedule in the *day ahead* market to zero. Such price represents the highest price in the *price-quantity* pairs submitted for that *dispatchable load*, *electricity storage resource, price responsive load* or *self-scheduling electricity storage resource,* and shall not be greater than the *maximum market clearing price*.

3.5 Energy Offers and Energy Bids

Note – Sections 3.5.1 - 3.5.8 – Without Tracked Changes

3.5.1 A *registered market participant* may have no more than one *energy offer* or one *energy bid* submitted on a given *resource* for any *dispatch hour*.

3.5.2 All *energy offers* and *energy bids* shall be submitted using such forms as may be specified by the *IESO*, which forms shall require, at a minimum, provision of all of the information specified in Appendices 7.1 and 7.2, respectively, except where the *IESO* specifies an alternative means and/or an alternative simplified form pursuant to section 3.1.2.3.

Hourly Dispatch Data Parameters

3.5.3 For each *dispatch hour,* each *energy offer* and *energy bid* shall include the following hourly *dispatch data* parameters where applicable:

3.5.3.1 *price-quantity pairs* in accordance with sections 3.5.5, 3.5.9 – 3.5.11, and 3.10.1.5;

3.5.3.2 hourly ramp quantities and the corresponding ramp up and ramp down values in accordance with section 3.5.7; and

3.5.3.3 a ramp rate applicable to all categories of *operating reserve* being *offered* in accordance with section 3.5.8.

3.5.4 For each *dispatch hour,* each *energy offer* may include the following hourly *dispatch data* parameters where applicable:

3.5.4.1 a *start-up offer* in accordance with section 3.5.12;

3.5.4.2 a *speed no-load offer* in accordance with section 3.5.13;

3.5.4.3 a *minimum hourly output* in accordance with sections 3.5.14 and 3.5.15;

3.5.4.4 an *hourly must-run* in accordance with sections 3.5.16 and 3.5.17; and

3.5.4.5 *variable generation forecast quantity* in accordance with sections 3.5.18.

3.5.5 Subject to 3.5.5.6, each *energy offer* or *energy bid* must contain at least two and, may contain up to 20 *price-quantity pairs* for each *dispatch hour*. *Price-quantity pairs* shall be submitted in accordance with this section:

3.5.5.1 The price in each such *price-quantity pair* shall be not more than the *maximum market clearing price* and not less than the negative *maximum market clearing price* and shall be expressed in dollars and whole cents per MWh.

3.5.5.2 The quantity in each such *price-quantity pair* shall:

a. in the case of a *resource* other than a *boundary entity resource*, be expressed in MW (or MWh/hour) to one decimal place and shall not be less than 0.0 MW (or 0.0 MWh/hour); or

b. in the case of a *boundary entity resource*, be expressed in whole MW (or MWh/hour) and shall not be less than 0 MW (or 0 MWh/hour).

3.5.5.3 The quantity in the first *price-quantity pair* shall be 0.0 MW (or 0.0 MWh/hour) or 0 MW (or 0 MWh/hour) as applicable.

3.5.5.4 The price in the second *price-quantity pair* shall be the same as the price in the first *price-quantity pair*.

3.5.5.5 The quantity in the second *price-quantity pair* shall be greater than or equal to the *minimum hourly output* submitted in accordance with section 3.5.14.

3.5.5.6 The number of *price-quantity pairs* submitted on a *pseudo-unit* shall not exceed 20 divided by the number of combustion turbine *resources* within the *generation facility,* rounded down to the next whole number.

3.5.5.7 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, shall submit in one of its *price-quantity pairs* a quantity that is equal to its *minimum loading point* submitted in accordance with section 3.5.29.

3.5.5.8 The prices in each *price-quantity pair* on a *variable generation resource* or a *generation resource* that has a component classified as *flexible nuclear generation* shall not be less than the floor prices specified in section 1.6.2.

3.5.6 Prices in *energy offers* and *energy bids* may be negative and such negative price shall imply:

3.5.6.1 when in an *energy offer*, that the *registered market participant* is willing to pay up to that price for each MWh of *energy* it is scheduled in the *day-ahead market* or injects rather than reduce its output in the *real-time market*; and

3.5.6.2 when in an *energy bid*, that the *registered market participant* is willing to take or dispose of excess *energy*, but only if paid at least that price for each excess MWh it is scheduled in the *day-ahead market,* or taken or disposed of in the *real-time market*.

3.5.7 Each *energy offer* or *energy bid*, other than an *energy offer* or *energy bid* on *a price responsive load***,** a *boundary entity resource*, a *self-scheduling electricity storage resource* that intends to withdraw, or a *virtual zonal resource*, shall contain at least one and up to five sets of hourly ramp quantities and its corresponding ramp up and ramp down values for each *dispatch hour*. Ramp quantities and corresponding ramp up and ramp down values shall be submitted in accordance with this section:

3.5.7.1 The hourly ramp quantity shall be expressed in MW to one decimal place, be greater than 0.0 MW and increase monotonically;

3.5.7.2 The hourly ramp quantity shall constitute the maximum MW quantity at which the corresponding ramp up and ramp down values apply;

3.5.7.3 The last hourly ramp quantity shall be greater than or equal to the maximum quantity of the *price-quantity pairs* submitted in an hour*;* and

3.5.7.4 The hourly ramp up and ramp down values in each such set shall be expressed in MW/minute to one decimal place, be greater than 0.0 MW/min and be less than or equal to the maximum *offer* or *bid* ramp rate, as applicable, specified during the registration process determined by the *IESO* in accordance with section 2.2.

3.5.8 Each *energy offer* associated with a *dispatchable generation resource, dispatchable electricity storage resource* or *dispatchable load* shall contain one ramp rate applicable for all categories of *operating reserve* being *offered*. Each such *operating reserve* ramp rate shall:

3.5.8.1 be greater than or equal to half the registered *reference level* associated with the *operating reserve* ramp rate;

3.5.8.2 in the case of a *dispatchable generation resource* or *dispatchable electricity storage resource*, be less than or equal to the maximum *offer* ramp rate for *operating reserve* specified during the registration process in accordance with section 2.2; and

3.5.8.3 in the case of a *dispatchable load* or *dispatchable electricity storage resource* be less than or equal to the maximum *bid* ramp rate for *operating reserve* specified during the registration process in section 2.2.

Note – Sections 3.5.9 - 3.5.11 – Tracked Changes

3.5.~~6~~9 The largest quantity in any *energy offer* or *energy bid* for any *dispatch hour* must be at least 1.0 MWh but shall not exceed the lesser of:

3.5.~~6~~9.1 the maximum output or withdrawal of *energy* in an hour indicated in the registration information for the relevant ~~*registered facility;*~~ *resource;*

3.5.~~6~~9.2 the maximum quantity of *energy* that can be supplied (for an *energy offer*) or taken (for an *energy bid*) in that *dispatch hour* by the ~~*registered facility*~~*resource*, as estimated by the *registered market participant* for that ~~*registered facility; or*~~ *resource;*

3.5.~~6~~9.3 the maximum allowed injection (for an *energy offer*) or withdrawal (for an *energy bid*) in that *dispatch hour* through the relevant *connection point*, as limited by the lesser of:

a.~~3.5.6.3.1~~ the capacity of any radial line connecting the ~~*registered*~~relevant *facility* to the *connection point*;

b.~~3.5.6.3.2~~ the maximum injection or withdrawal as specified in the *connection agreement* applicable to the ~~*registered*~~relevant *facility*; or

c.~~3.5.6.3.3~~ the maximum injection or withdrawal otherwise permitted by the relevant *transmitter*~~.~~;

3.5.9.4 for a *virtual zonal resource*, the quantity referred to in section 3.10.1.3.

3.5.~~6A~~10 Where one or more *electricity storage facilities* and one or more other *generation facilities* are all:

3.5.~~6A~~10.1 connected at the same *connection point*;

3.5.~~6A~~10.2 registered to the same *registered market participant,* and

3.5.~~6A~~10.3 none of the *facilities* or any associated *resources* are providing *contracted ancillary services* or participating in the *operating reserve market*;

section 3.5.~~9~~6 shall not apply to those *facilities* or any associated *resources*. Instead, the largest quantity in any *energy offer* or *energy bid* for any *dispatch hour* for ~~each facility~~such *resources* must be at least 1.0 MWh but shall not exceed the lesser of:

3.5.~~6A~~10.4 the maximum output of *energy* in an hour indicated in the registration information for the relevant ~~*registered facility*~~*resource*~~;~~;

3.5.~~6A~~10.5 the maximum quantity of *energy* that can be supplied (for an *energy offer*) or taken (for an *energy bid*) in that *dispatch hour* by the ~~*registered facility*~~*resource*, as estimated by the *registered market participant* for that ~~*registered facility*~~*resource*; or

3.5.~~6A~~10.6 the maximum allowed injection (for an *energy offer*) or withdrawal (for an *energy bid*) in that *dispatch hour* through the relevant *connection point*, as limited by the lesser of:

a.~~3.5.6A.6.1~~ the capacity of any radial line connecting the ~~*registered*~~ relevant *facility* to the connection point; or

b.~~3.5.6A.6.2~~ the maximum injection or withdrawal as specified in the *connection agreements* applicable to the ~~*registered*~~ relevant *facilities* or to the maximum injection or withdrawal otherwise permitted by the relevant *transmitter,* calculated as the total net injections and withdrawals for all *generation facilities* and *electricity storage facilities* registered to the same *registered market participant* at the same *connection point*.

3.5.~~6B~~11 Where one or more *electricity storage facilities* and one or more other *generation facilities* are all:

3.5.~~6B~~11.1 connected at the same *connection point*;

3.5.~~6B~~11.2 registered to the same *registered market participant*, and

3.5.~~6B~~11.3 any of the *facilities* or any associated *resources* are providing *contracted ancillary services* or participating in the *operating reserve market*;

sections 3.5.~~9~~6 and 3.5.10~~6A~~ shall not apply to those *facilities* or any associated *resources*. Instead, the largest quantity in any *energy offer* or *energy bid* for any *dispatch hour* for each ~~*facility*~~such *resources* must be at least 1.0 MWh but shall not exceed the lesser of:

3.5.~~6B~~11.4 the maximum output of *energy* in an hour indicated in the registration information for the relevant ~~*registered facility*~~*resource*;

3.5.~~6B~~11.5 the maximum quantity of *energy* that can be supplied (for an *energy offer*) or taken (for an *energy bid*) in that *dispatch hour* by the ~~*registered facility*~~*resource*, as estimated by the *registered market participant* for that ~~*registered facility*~~*resource*; or

3.5.~~6B~~11.6 the maximum allowed injection (for an *energy offer*) or withdrawal (for an *energy bid*) in that *dispatch hour* through the relevant *connection point*, as limited by the lesser of:

~~3.5.6B.6.1~~a. the capacity of any radial line connecting the ~~*registered*~~ relevant *facility* to the *connection point*; or

~~3.5.6B.6.2~~b. the maximum injection or withdrawal will be what is specified in the *connection agreement* applicable to the ~~*registered*~~ relevant *facility* or the maximum injection or withdrawal otherwise permitted by the relevant *transmitter,* and the sum of all *energy* offers or the sum of all *energy* bids from all *facilities* shall not exceed these limits.

Note – New Sections 3.5.12 - 3.5.18 – Without Tracked Changes

3.5.12 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, may submit a *start-up offer* for each *thermal state*. The *start-up offer* shall be expressed in whole dollars between 0 and 999,999.

3.5.13 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick-start resource* and is not a nuclear *generation resource*, may submit a *speed no-load offer*. The *speed no-load offer* shall be expressed in whole dollars between 0 and 99,999.

3.5.14 A *registered market participant* for a *dispatchable* hydroelectric *generation resource* may submit a *minimum hourly output* that the *registered market participant* reasonably expects to be necessary to prevent the *resource* from operating in a manner:

3.5.14.1 that would require spill restrictions; and

3.5.14.2 that would endanger the safety of any person, damage equipment, or violate any *applicable law*.

3.5.15 *Minimum hourly output* shall be submitted only in accordance with this section:

3.5.15.1 *Minimum hourly output* shall be expressed in MW, up to one decimal place and be greater than or equal to 0.0 MW;

3.5.15.2 *Minimum hourly output* shall not exceed the largest quantity in the *price-quantity pairs* for that hour; and

3.5.15.3 The sum of all *minimum hourly output* submissions in a given *dispatch day* shall not exceed the *dispatchable* hydroelectric *generation resource's maximum daily energy limit* submitted under section 3.5.25.

3.5.16 A *registered market participant* for a *dispatchable* hydroelectric *generation resource* may submit an *hourly must run* if it has submitted the required information in accordance with section 2.2.6A.3, and that *registered market participant* reasonably expects to be necessary to prevent the *resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*.

3.5.17 *Hourly must run* shall be submitted only in accordance with this section:

3.5.17.1 *Hourly must run* shall be expressed in MW, up to one decimal place and be greater than or equal to 0.0 MW;

3.5.17.2 *Hourly must run* shall not exceed the largest quantity in the associated *price-quantity pairs* for that hour; and

3.5.17.3 The sum of all *hourly must run* submissions in a *dispatch day* on (i) a *dispatchable* hydroelectric *generation resource* that is not registered on a *forebay*; or (ii) all *dispatchable* hydroelectric *generation resource*s that are registered on the same *forebay*, shall not exceed the *maximum daily energy limit* submitted on the *resource* or the *forebay*, as applicable.

3.5.18 A *registered market participant* for a *dispatchable variable generation resource* may submit a *variable generation forecast quantity* only in accordance with this section:

3.5.18.1 the *variable generation forecast quantity* shall be expressed in MWh per hour to one decimal place and must be greater than or equal to 0.0 MW; and

3.5.18.2 the *variable generation forecast quantity* shall not exceed the maximum registered *generation capacity* in accordance with section 3.5.9.1.

Note – Tracked Changes displayed in sections 3.5.19 - 3.5.20

Linked Wheeling Through Transactions

3.5.~~8~~19 All *linked wheeling through transactions* shall consist of:

3.5.~~8~~19.1 an individual *energy offer* from a *boundary entity resource* injecting *energy* into the *IESO-controlled grid* and an *energy bid* from a *boundary entity resource* withdrawing *energy* from the *IESO-controlled grid*; or

3.5.8<u>19</u>.2 an individual *energy offer* from a *boundary entity* <u>*resource*</u> injecting *energy* into the *IESO-controlled grid* and an *energy bid* from a *boundary entity* <u>*resource*</u> withdrawing *energy* from the *IESO-controlled grid,* and an identification of the desire for these to be linked, in accordance with the applicable *market manual*. The *IESO* shall assess ~~so identified~~<u>these</u> *offers* ~~separately from their associated~~<u>and</u> *bids*~~.~~ <u>as linked transactions.</u> The *IESO* shall schedule and *dispatch* the linked *offers* and *bids* such that both are equal to the lower of the *offer* or *bid* that would otherwise be scheduled and *dispatched*.

3.5.8<u>20</u> An *energy bid* submitted by a *registered market participant* ~~for~~ <u>on</u> a *boundary entity* <u>*resource*</u> in respect of the withdrawal from the *IESO-controlled grid* of *energy* destined for an *intertie zone* in the United States of America shall constitute a declaration by a *registered market participant* for the *boundary entity* <u>*resource*</u> of an intention to export *energy* in the circumstances described in paragraphs 1(b) to 1(d) of Part V of Schedule VI of the Excise Tax Act (Canada).

Note – Sections 3.5.21 - 3.5.35 – Without Tracked Changes

Daily Dispatch Data Parameters

3.5.21 For each *dispatch day,* an *energy offer* may include the following daily *dispatch data* parameters where applicable which will apply to each *dispatch hour* within the *dispatch day*:

3.5.21.1 Downstream *linked forebay*, *time lag* and *MWh ratio* in accordance with section 3.5.23;

3.5.21.2 *Forbidden regions* in accordance with 3.5.24;

3.5.21.3 *Maximum daily energy limit* in accordance with section 3.5.25;

3.5.21.4 *Minimum daily energy limit* in accordance with section 3.5.26;

3.5.21.5 *Single cycle mode* in accordance with section 3.5.27; and

3.5.21.6 *Maximum number of starts per day* in accordance with section 3.5.28.

3.5.22 For each *dispatch day,* an *energy offer* and *energy bid* shall include the following daily *dispatch data* parameters where applicable which will apply to each *dispatch hour* within the *dispatch day*:

3.5.22.1 *Minimum loading point* in accordance with section 3.5.29;

3.5.22.2 *Minimum generation block run-time* in accordance with section 3.5.30;

3.5.22.3 *Minimum generation block down-time* in accordance with section 3.5.31;

3.5.22.4 *Lead time* in accordance with section 3.5.32;

3.5.22.5 *Ramp up energy to minimum loading point* in accordance with section 3.5.33;

3.5.22.6 Daily ramp quantities and the corresponding ramp up and ramp down values in accordance with section 3.5.34; and

3.5.22.7 *Thermal state* in accordance with section 3.5.35;

3.5.23 A *registered market participant* for a *dispatchable* hydroelectric *generation resource* that intends to establish a *linked forebay* shall submit the corresponding set of *dispatch data* consisting of (i) the downstream *linked forebay*, (ii)*time lag*, and (iii)*MWh ratio*, if the *registered market participant* reasonably expects that the submission of the above daily *dispatch data* parameters is necessary to prevent the *resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*. The downstream *linked forebay*, *time lag* and *MWh ratio* shall be submitted only in accordance with this section:

3.5.23.1 the downstream *linked forebay* shall consist of a *forebay* that is registered downstream to the relevant *forebay* within the *cascade group*, registered in accordance with section 2.2.6A.4;

3.5.23.2 the *time lag* shall be expressed as a whole number that is greater than or equal to 0 and less than or equal to the registered *time lag;* and

3.5.23.3 *MWh ratio* shall be expressed up to two decimal places and shall be greater than 0.00.

3.5.24 A *registered market participant* for a *dispatchable* hydroelectric *generation resource* that has one or more *forbidden regions* registered in accordance with section 2.2.6A.1, may submit, subject to section 3.5.24.1, no more than five *forbidden regions* as daily *dispatch data* parameters. Each *forbidden region* shall be submitted only in accordance with this section in order to apply to a given *dispatch day*:

3.5.24.1 The number of *forbidden regions* submitted shall not exceed the number of *forbidden regions* registered for the applicable *resource;*

3.5.24.2 The *registered market participant* shall submit a quantity for both the upper limit and lower limit for the applicable *forbidden region,* expressed in MW up to one decimal place;

3.5.24.3 The quantity submitted for the upper limit shall be greater than the quantity submitted for the lower limit of that *forbidden region*;

3.5.24.4 The quantity submitted for the upper limit of a *forbidden region* shall be less than or equal to the registered upper limit of that *forbidden region*;

3.5.24.5 The quantity submitted for the lower limit of a *forbidden region* shall be greater than or equal to the registered lower limit of that *forbidden region*; and

3.5.24.6 If more than one *forbidden region* is submitted in a given *dispatch day*, the lower limit for each successive *forbidden region* shall be greater than the upper limit of the previously submitted *forbidden region*.

3.5.25 A *registered market participant* for a *dispatchable electricity storage resource* or a *dispatchable generation resource* other than a nuclear *generation resource* may submit a *maximum daily energy limit*. *Maximum daily energy limit* shall be submitted only in accordance with this section:

3.5.25.1 *Dispatchable* hydroelectric *generation resources* that are registered on the same *forebay* shall be collectively bound by the same *maximum daily energy limit*;

3.5.25.2 *Maximum daily energy limit* shall be expressed in MWh, up to one decimal place, and shall be greater than or equal to 0.0 and less than or equal to 999,999.9;

3.5.25.3 *Maximum daily energy limit* shall be greater than or equal to the *energy* required to operate the *generation resource* at *minimum loading point* for the *minimum generation block run-time*, submitted in accordance with sections 3.5.29 and 3.5.30, as applicable; and

3.5.25.4 For *dispatchable* hydroelectric *generation resources,* the *maximum daily energy limit* shall be greater than or equal to the *minimum daily energy limit* submitted for the *dispatch day* on (i) the *resource* where it is not registered on a *forebay*; or (ii) all the *resources* registered on the *forebay*.

3.5.26 A *registered market participant* for a *dispatchable* hydroelectric *generation resource* may submit a *minimum daily energy limit* if the submission is necessary to prevent the *resource* from operating in a manner that would endanger the safety of any person, damage equipment, or violate any *applicable law*. *Minimum daily energy limit* shall be submitted only in accordance with this section:

3.5.26.1 *Dispatchable hydroelectric generation resources* that are registered on the same *forebay* shall be collectively bound by the same *minimum daily energy limit*;

3.5.26.2 *Minimum daily energy limit* shall be expressed in MWh up to one decimal place, shall be greater than or equal to 0.0, and less than or equal to the lesser of:

a. 999,999.9,

b. the sum of all hourly *energy* quantities submitted for the *dispatch day* on (i) the *resource* where it is not registered on a *forebay;* or (ii) all the *resources* registered on the *forebay;* as applicable; and

c. the *maximum daily energy limit* submitted for the dispatch day on (i) the *resource* where it is not registered on a *forebay*; or (ii) all the *resources* registered on the *forebay*;

as applicable.

3.5.27 A *registered market participant* for a *pseudo-unit* may submit *single cycle mode*.

3.5.28 A *registered market participant* for a *dispatchable generation resource* (i) that is a *non-quick start resource* and is not a nuclear *generation resource*, or (ii) that is a hydroelectric *generation resource* provided that it has registered a *start indication value* in accordance with 2.2.6A.2, may submit *a maximum number of starts per day*. *Maximum number of starts per day* shall be submitted only in accordance with this section:

3.5.28.1 Subject to section 3.5.28.2, *maximum number of starts per day* shall be submitted as a whole number less than or equal to 24; and

3.5.28.2 *Maximum number of starts per day* for *dispatchable* hydroelectric *generation resources* registered as an aggregated *resource* in accordance with section 2.3 shall not exceed 24 multiplied by the number of *start indication values* registered to the *resource* during registration.

3.5.29 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, shall submit a *minimum loading point*. *Minimum loading point* shall be submitted only in accordance with this section:

3.5.29.1 For a steam turbine *resource* that is registered with a *combined cycle plant* and not registered for *resource* aggregation, the *registered market participant* shall submit a *minimum loading point* for each combustion turbine *resource* within that *generation facility*, to reflect the n-on-1 *minimum loading point*. A *registered market participant* shall submit at least one n-on-1 *minimum loading points* and no more than the lesser of (i) four or (ii) the number of combustion turbine *resources* within that *generation facility.* N-on-1 *minimum loading points* shall be submitted in increasing numerical order*;*

3.5.29.2 *Minimum loading point* shall be greater than 0.0 MW, up to one decimal place, and shall not exceed the lesser of:

a. 9999.9 MW; or

b. the maximum registered *generation capacity* in accordance with section 3.5.9.1 and the applicable *market manual*.

3.5.30 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, shall submit a

minimum generation block run-time. *Minimum generation block run-time* shall be submitted only in accordance with this section:

3.5.30.1 *minimum generation block run-time* shall be a whole number greater than or equal to zero; and

3.5.30.2 *minimum generation block run-time* shall not exceed 24.

3.5.31 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, shall submit *minimum generation block down-time* for each of its *thermal states*. *Minimum generation block down-time* shall be submitted only in accordance with this section:

3.5.31.1 *minimum generation block down-time* shall be a whole number greater than or equal to zero;

3.5.31.2 *minimum generation block down-time* submitted for the hot *thermal state* shall not exceed *minimum generation block down-time* submitted for the warm *thermal state*, and *minimum generation block down-time* submitted for the warm *thermal state* shall not exceed *minimum generation block down-time* submitted for the cold *thermal state*;

3.5.31.3 the *minimum generation block down-time* shall not exceed 24 for the hot *thermal state*; and

3.5.31.4 *the minimum generation block down-time* shall not exceed 99 for the warm or cold *thermal state*.

3.5.32 A *registered market participant* for a *GOG-eligible resource* shall submit a *lead time* for each of its *thermal states*; however, a *registered market participant* for a *dispatchable generation resource* (i) that is a *non-quick start resource*, and (ii) is not a nuclear *generation resource* or a *GOG-eligible resource*, may, but for the avoidance of doubt, is not required to, submit a *lead time* for each of its *thermal states*. *Lead time* shall be submitted only in accordance with this section:

3.5.32.1 *lead time* for each *thermal state* shall be a whole number greater than or equal to zero;

3.5.32.2 *lead time* submitted for the hot *thermal state* shall not exceed *lead time* submitted for the warm *thermal state*, and *lead time* submitted for the warm *thermal state* shall not exceed *lead time* submitted for the cold *thermal state*; and

3.5.32.3 *lead time* shall not exceed the lesser of:

a. 24 for each *thermal state*; or

b. the *minimum generation block down-time* for the corresponding *thermal state* submitted in accordance with section 3.5.31.

3.5.33 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource*, shall submit *ramp up energy to minimum loading point*, consisting of its *ramp hours to minimum loading point* and its corresponding *energy per ramp hour*, for each *thermal state*. *Ramp up energy to minimum loading point* shall be submitted only in accordance with this section:

3.5.33.1 *Ramp hours to minimum loading point* for each *thermal* state shall be a whole number greater than or equal to zero;

3.5.33.2 *Ramp hours to minimum loading point* shall not exceed the lesser of:

a. 12 for each *thermal state;* or

b. the *lead time* for the corresponding *thermal state* submitted in accordance with section 3.5.32.

3.5.33.3 The *energy per ramp hour* for each *thermal state* shall be expressed in MWhs up to one decimal place and be greater than or equal to the greater of:

a. 0.1; or

b. the *energy per ramp hour* for the previous hour for the corresponding *thermal state*, as applicable.

3.5.33.4 The *energy per ramp hour* for each *thermal state* shall be less than or equal to the *minimum loading point*.

3.5.34 Each *registered market participant* that submits an *energy offer* or *energy bid*, other than an *energy offer* or *energy bid* on a *price responsive load*, *boundary entity resource*, *self-scheduling storage resource* that intends to withdraw, or *virtual zonal resource*, shall submit at least one and up to five sets of daily ramp quantities and its corresponding ramp up and ramp down values for each *dispatch day*. Daily ramp quantities and corresponding ramp up and ramp down values shall be submitted in accordance with this section:

3.5.34.1 The daily ramp quantity shall be expressed in MW to one decimal place, be greater than 0.0 MW and increase monotonically;

3.5.34.2 The daily ramp quantity shall constitute the maximum MW quantity at which the corresponding ramp up and ramp down values apply;

3.5.34.3 The last daily ramp quantity shall be greater than or equal to the maximum *offer* quantity submitted for the *dispatch day*; and

3.5.34.4 The daily ramp up and ramp down values in each such set shall be expressed in MW/minute to one decimal place, be greater than 0.0 MW/minute and be less than or equal to the daily maximum *offer* or *bid* ramp rate, as applicable, specified during the registration process in accordance with section 2.2.

3.5.35 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource* shall submit a *thermal state*.

Note – Tracked Changes displayed in sections 3.6 - 3.12

3.6 Operating Reserve Offers

3.6.0 A *registered market participant* may submit an *offer* to provide *operating reserve* from an eligible *dispatchable generation resource*, a *dispatchable load*, a *dispatchable electricity storage resource* or a *boundary entity resource*, as applicable, in accordance with MR Ch.5 s.4.5.1.

3.6.1 A *registered market participant* may not submit, for any ~~*registered facility*~~ *resource*, more than one *offer* to provide each class of *operating reserve* in any *dispatch hour*.

3.6.2 Each submitted *offer* to provide *operating reserve* must contain at least two~~2~~ and may contain up to five~~5~~ *price-quantity pairs* ~~for each class of *operating reserve* for each *dispatch hour*.~~. The price in each such *price-quantity pair* shall be not more than the ~~*Maximum Operating Reserve Price* or *MORP*~~*maximum operating reserve price* and not less than zero and shall be expressed in dollars and whole cents per MW. The quantity in each such *price-quantity pair* shall:

3.6.2.1 in the case of a ~~*registered facility*~~*resource* other than a *boundary entity resource*, be expressed in MW to one decimal place and shall not be less than 0.0 MW; or

3.6.2.2 in the case of a ~~*registered facility* that is a~~ *boundary entity resource*, be expressed in whole MW and shall not be less than 0 MW.

The quantity in the first *price-quantity pair* shall be 0.0 MW (or 0.0 MWh/hour) or 0 MW (or 0 MWh/hour) as applicable. The price in the second *price-quantity pair* shall be the same as the price in the first *price-quantity pair*.

3.6.3 Each *offer* to provide *operating reserve* shall be accompanied by a corresponding *energy offer* or *energy bid* ~~that covers~~for at least the same MW ~~range~~quantity *offered* for *operating reserve*.

3.6.4 *Offers* to supply *operating reserve* shall be submitted in such form as may be specified by the *IESO*, which form shall require, at a minimum, provision of all of the

information specified in Appendix 7.3, except where the *IESO* specifies an alternative means and/or an alternative simplified form pursuant to section 3.~~2~~1.2.3.

3.6.5 Each *offer* to provide *operating reserve* associated with a *dispatchable generation resource* or *dispatchable electricity storage resource* that proposes to inject shall contain a *reserve loading point* for each applicable class of *operating reserve offered*.

3.6.6 A *registered market participant* for a *dispatchable generation resource* or a *dispatchable electricity storage resource* shall not submit an *offer* to provide *operating reserve* if the *registered market participant* has estimated, in accordance with sections 3.5.9.2, that its *resource* cannot be scheduled to a quantity greater than or equal to its *reserve loading point* or is otherwise unable to provide the *operating reserve.*

3.6.7 A *registered market participant* for a *dispatchable generation resource* or a *dispatchable electricity storage resource* shall withdraw an *offer* to provide *operating reserve* as soon as practicable, if, for any *dispatch hour* in the current *pre-dispatch schedule,* the *resource* cannot provide the scheduled *operating reserve* because the *resource's pre-dispatch schedule* for *energy* is less than its *reserve loading point.*

3.7 Self-Scheduling ~~Generators~~Generation Resources

3.7.1 A *registered market participant* for a *self-scheduling generation* ~~*facility*~~*resource* shall submit *dispatch data* for the *day-ahead market* indicating the amount of *energy* that the *registered market participant* reasonably expects to be provided by that *self-scheduling generation* ~~*facility*~~*resource* in each *dispatch hour*. Such *dispatch data* shall:

3.7.1.1 be submitted to the *IESO* in such form as may be specified by the *IESO*~~,~~ by providing, at a minimum, ~~including provision of~~ the ~~applicable~~ information specified in Appendix 7.1; and

3.7.1.2 comply with section 3.4.4~~A~~.

3.7.2 A *registered market participant* for a *self-scheduling generation resource* associated with a *cogeneration facility* or ~~self-scheduling~~an *enhanced combined cycle facility* shall ensure its *facility* operates in accordance with its *dispatch data* within the tolerances for updating *dispatch data* outlined in section 3.3.8.

~~3.7.3 Subject to section 1.7 defining when the day-ahead commitment process shall function, a registered market participant for a registered facility that is a self-scheduling generation facility shall submit dispatch data after 6:00 EST but before 10:00 EST of the pre-dispatch day in accordance with section 3.7.1.~~

3.~~7.~~8 Self-Scheduling Electricity Storage Resources

3.~~8~~7~~A~~.1 A *registered market participant* for a *self-scheduling electricity storage* ~~*facility*~~ *resource* shall submit *dispatch data* in the *day-ahead market* indicating the amount of *energy* that the *registered market participant* reasonably expects to be injected or

withdrawn by that *self-scheduling electricity storage ~~facility~~ resource* in each *dispatch hour*. Such *dispatch data* shall:

3.~~8~~7~~A~~.1.1 be submitted to the *IESO* in such form as may be specified by the *IESO~~,~~* by providing, at a minimum, the ~~including provision of the applicable~~ information specified in Appendix 7.1 and 7.2; and

3.~~8~~7~~A~~.1.2 in the case of a *self-scheduling electricity storage resource* that intends to inject, comply with section 3.4.6~~4C~~, and in the case of a *self-scheduling electricity storage resource* that intends to withdraw, comply with section 3.4.7.

~~3.7A.2 Subject to section 1.7 defining when the day-ahead commitment process shall function, a *registered market participant* for a *registered facility* that is a *self-scheduling electricity storage facility* shall submit *dispatch data* after 6:00 EST but before 10:00 EST of the *pre-dispatch day* in accordance with section 3.7A.1.~~

3.~~8~~9 Intermittent ~~Generators~~Generation Resources

3.~~9~~8.1 A *registered market participant* for an *intermittent ~~generator~~ generation resource* shall submit *dispatch data* for the *day-ahead market* indicating its best forecast of the amount of *energy* that the *intermittent ~~generator~~ generation resource* will inject in each *dispatch hour*. Such *dispatch data* shall:

3.~~9~~8.1.1 be submitted to the *IESO* in such form as may be specified by the *IESO~~,~~* by providing, at a minimum, the ~~including provision of the applicable~~ information specified in Appendix 7.1; and

3.~~9~~8.1.2 comply with section 3.4.4~~A~~.

~~3.8.2 Subject to section 1.7 defining when the day-ahead commitment process shall function, a registered market participant for a registered facility that is an intermittent generator shall submit dispatch data after 6:00 EST but before 10:00 EST of the pre-dispatch day indicating its best forecast of the amount of energy that the intermittent generator will inject in each dispatch hour of the next dispatch day in accordance with section 3.8.1.~~

~~3.8A Transitional Scheduling Generators~~

~~3.8A.1 A registered market participant for a registered facility that is a transitional scheduling generator shall submit dispatch data indicating its forecast of the amount of energy that the transitional scheduling generator will inject in each dispatch hour of the dispatch day. Such dispatch data shall be submitted to the IESO for the initial pre-dispatch schedule in accordance with section 3.3.1 and in such form as may be specified by the IESO.~~

~~3.8A.2 Subject to section 1.7 defining when the *day-ahead market* commitment process shall function, a *registered market participant* for a *registered facility* that is a transitional scheduling generator shall submit *dispatch data after* 6:00 EST but~~

~~before 10:00 EST of the *pre-dispatch day* indicating its forecast of the amount of *energy* that the *transitional scheduling generator* will inject in each *dispatch hour* of the next *dispatch day* in accordance with section 3.8A.1.~~

3.10 Virtual Zonal Resources

3.10.1 A *virtual trader* for a *virtual zonal resource* shall submit an *energy offer* or *bid* in the *day-ahead market* in accordance with the following requirements, in addition to the applicable requirements provided by sections 3.4 and 3.5:

3.10.1.1 Each *energy offer* or *bid* shall be submitted to the *IESO* by providing, at a minimum, the information specified in Appendix 7.1 and 7.2, as applicable;

3.10.1.2 Each quantity in a subsequent *price-quantity pair* shall be at least 1.0 MW greater than the previous quantity;

3.10.1.3 The largest *energy* quantity in any *dispatch hour* shall not exceed the *IESO*-determined *virtual transaction offer* or *bid* quantity limit established in accordance with section 1.6.3;

3.10.1.4 The *virtual trader's IESO*-estimated submitted-but-not-cleared cumulative dollar exposure resulting from such *energy offer* or *bid* shall not exceed the *virtual trader's trading limit* for *virtual transactions;*

3.10.1.5 The number of *price-quantity pairs* submitted by a *virtual trader* on all *virtual zonal resources* for each *dispatch day* shall not exceed the *virtual transaction energy* lamination volume limit established in accordance with section 1.6.3; and

3.10.1.6 The absolute value of the sum of the *energy bid* and *offer* quantities submitted by a *virtual trader* on all *virtual zonal resources* for each *dispatch day* shall not exceed the *virtual trader's maximum daily trading limit*.

3.11 Price Responsive Loads

3.11.1 A *registered market participant* for a *price responsive load* that intends to consume *energy* in the *real-time market* shall submit an *energy bid* in the *day-ahead market*. Such *dispatch data* shall:

3.11.1.1 be submitted to the *IESO* in such form as may be specified by the *IESO*, by providing, at a minimum, the information specified in Appendix 7.2; and

3.11.1.2 comply with section 3.4.7.

3.11.2 For a set of *load equipment* that is associated with both a *price responsive load* and an *hourly demand response resource*, the sum of the maximum *bid* quantities submitted on each such *price responsive load* and *hourly demand response resource*

shall not exceed the maximum quantity permitted under 3.5.9.1 for the *price responsive load*.

3.12~~9~~ Transmission System Information

3.12.1 Each *transmitter* whose *transmission system* is part of the *IESO-controlled grid* shall provide the *IESO* with the *transmission system* information described in Appendix 7.4 in such form as the *IESO* may specify.

3.~~9~~12.2 Each *transmitter* referred to in section 3.~~9~~12.1 shall update the information described in Appendix 7.4 so that it is current at:

3.~~9~~12.2.1 15:00 EST on the day which is two days prior to the relevant *dispatch day*;

3.~~9~~12.2.2 05:00 EST on the ~~*pre-*~~ day prior to the relevant *dispatch day*;

3.~~9~~12.2.3 10:00 ~~EST~~EPT on the ~~*pre-*~~ day prior to the relevant *dispatch day*; and

3.~~9~~12.2.4 any time subsequent to 10:00 ~~EST~~EPT on the ~~*pre-*~~ day prior to the relevant *dispatch day* up to the beginning of the relevant *dispatch hour* if there is a material change in the information required by this section.

3A. The Scheduling Process

3A.1 Information Used by the IESO to Determine Schedules and Prices

3A.1.1 The *IESO* shall determine a random daily *dispatch* order for *variable generators* that are *registered market participants* in accordance with the applicable *market manual*.

3A.1.2 The *IESO* shall represent power flow relationships between locations on the *IESO-controlled grid* and between the *IESO control area* and adjoining *control areas* for use in Appendices 7.5, 7.5A, 7.6.

3A.1.3 The *IESO* shall use an *IESO-controlled grid model,* with constraints for *interconnections* represented as *intertie* limits for each *intertie zone* or multiple *intertie zones*.

3A.1.4 Limits on *intertie* flows between the *integrated power system* and neighbouring *transmission systems* shall be based on:

3A.1.4.1 a simple model that assumes that each *intertie meter* is *connected* to an isolated *intertie zone* by a single transmission line;

3A.1.4.2 the *IESO's* best estimate of the maximum flow on the single transmission line to each *intertie zone,* given the status of the neighbouring *transmission systems* and expected or actual unscheduled flows (including as unscheduled flows any flows planned by the *IESO* to

balance interchange accounts with other *control area operators*). The *IESO's* best estimate of the maximum flow on the single transmission line to an *intertie zone* may reflect the *integrated power system's* limited capability to supply and export *energy* to an *intertie zone* and applicable neighbouring *transmission system* without scheduling imported *energy* to supply the exported *energy*; and

3A.1.4.3 a net *interchange scheduling* limit to represent the *integrated power system's* ability to respond to hourly *interchange schedule* deviations and maintain the *reliability* of the *IESO-controlled grid.*

3A.1.5 Constraints on the use of the *IESO-controlled grid* shall be determined by the *IESO* as necessary to maintain *reliable* system operations, which shall include, at a minimum, the following:

3A.1.5.1 the largest applicable *contingency events* and any increments above these required to satisfy applicable *reliability standards*;

3A.1.5.2 *security* constraints on identified *facilities*;

3A.1.5.3 minimum requirements for each class of *operating reserve*;

3A.1.5.4 the *IESO*'s commitments to neighbouring *transmission systems* for *operating reserve* and *regulation*;

3A.1.5.5 the availability and need for contracted *ancillary services* and *reliability must-run resources*; and

3A.1.5.6 *reliability* constraints associated with *interchange schedules* as referred to in section 3A.1.4.3.

3A.1.6 The *IESO* shall determine the most recent projections of forecast data and other information pertaining to the *electricity system* which relates to future periods of time, as are available to the *IESO*.

3A.1.7 The *IESO* shall determine the demand forecasts.

3A.2 Uses of the Pre-Dispatch Calculation Engine and Real-Time Calculation Engine

3A.2.1 The *IESO* shall, as far as practical, use the outputs of the *pre-dispatch calculation engine* and *real-time calculation engine* to determine the *dispatch instructions* that guide actual physical operations of the *electricity system*. However, because the *pre-dispatch calculation engine* or *real-time calculation engine* is only an approximation of a complex physical reality and may sometimes malfunction, the *IESO* may modify or override the results of the *pre-dispatch calculation engine* and the *real-time calculation engine* when issuing *dispatch instructions* pursuant to section 7.

~~4. The Dispatch Algorithm~~

~~5. The Pre-dispatch Scheduling Process~~

~~6. The Real-Time Scheduling Process~~

Note: Existing Sections 4 – 6 have been deleted in their entirety and replaced with new section 4 – The Day-Ahead Market, section 5 – The Pre-Dispatch Process and section 6 – The Real-Time Market.

4. The Day-Ahead Market

4.1 Day-Ahead Market Scheduling Process

4.1.1 The *IESO* shall determine *day-ahead schedules* in order to create financially binding obligations on the day prior to the relevant *dispatch day* to facilitate *settlement*, and to provide itself and *market participants* with advance information and projections necessary to plan the physical operation of the *electricity system*.

4.2 Determining the Day-Ahead Schedule

4.2.1 When determining the *day-ahead schedule* applicable to the first hour of the next *dispatch day*, the *IESO* may disregard the net *intertie* scheduling limit.

4.3 DAM Scheduling Process Failure

4.3.1 If the *IESO* fails to produce valid results, the *IESO* may rerun the *DAM calculation engine* before *DAM expiration*. Where the *IESO* reruns the *DAM calculation engine*, the *IESO* shall notify *market participants* of the rerun and of any revised inputs.

4.3.2 The *IESO* shall declare a failure of the *day-ahead market* by 15:30 EPT if it does not *publish day-ahead market* results in accordance with sections 4.7.2.

4.3.3 If the *IESO* declares a failure of the *day-ahead market*:

4.3.3.1 as soon as reasonably practicable after the failure, the *IESO* shall notify *market participants* of the failure of the *day-ahead market* for the relevant *dispatch day*, and

4.3.3.2 *registered market participants* shall not be subject to sections 3.1.11, 3.1.12, and 3.1.13 for the relevant *dispatch day*.

4.4 Administration of the Day-Ahead Market Calculation Engine

4.4.1 The *IESO* shall administer the *day-ahead market calculation engine* in accordance with Appendix 7.5.

4.5 Information Used by the Day-Ahead Market Calculation Engine

4.5.1 The *IESO* shall use the most current valid information in accordance with Appendix 7.5 as inputs to the *day-ahead market calculation engine*.

4.6 Passes of the Day-Ahead Market Calculation Engine

4.6.1 The *day-ahead market calculation engine* shall determine commitments, schedules, and prices over a 24-hour period for *energy* and *operating reserve*. The *day-ahead market calculation engine* shall execute three passes, which shall include the:

4.6.1.1 Market Commitment and Market Power Mitigation Pass in accordance with section 7 of Appendix 7.5;

4.6.1.2 Reliability Scheduling and Commitment Pass in accordance with section 17 of Appendix 7.5; and

4.6.1.3 DAM Scheduling and Pricing Pass in accordance with section 19 of Appendix 7.5.

4.7 Publishing Day-Ahead Market Information

Daily information

4.7.1 Prior to the *day-ahead market restricted window* or as soon as practicable thereafter, the *IESO* shall *publish* the following information for the next *dispatch day*:

4.7.1.1 *intertie* scheduling limits; and

4.7.1.2 area *operating reserve* constraints.

4.7.2 As soon as practicable after the *day-ahead market calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *day-ahead market calculation engine*, the *IESO* shall *publish* the following hourly information for the *day-ahead market* results for the next *dispatch day*:

4.7.2.1 any area *operating reserve* shortfalls;

4.7.2.2 the forecast of expected total system load, total system losses, available *energy*, and *operating reserve* requirements for the forecast period;

4.7.2.3 binding *security* constraints;

4.7.2.4 aggregated *energy offers* and *bids* submitted and cleared for each *virtual transaction zone*;

4.7.2.5 *locational marginal prices* for *energy* and *operating reserve* in the *IESO control area*;

4.7.2.6 *virtual zonal prices*;

4.7.2.7 the *day-ahead market Ontario zonal price*; and

4.7.2.8 *locational marginal prices* for *energy* and *operating reserve* for each *intertie zone.*

Other information

4.7.4 The *IESO* shall *publish* the daily *dispatch* order determined randomly by the *IESO* in accordance with section 3A.1.1 for *variable generation resources* at least once each calendar month in accordance with the applicable *market manual.*

4.7.5 The *IESO* shall *publish* the shadow prices for each binding *security* constraint that are used to generate *locational marginal prices* by the *day-ahead market calculation engine* no sooner than five calendar days after the *trading day.*

4.7.6 As soon as practicable after the *day-ahead market calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *day-ahead market calculation engine,* and the conditions set out in section 10.5.1 of Appendix 7.5 are met, the *IESO* shall *publish* a summary of the hours in the study period related to global market power conditions for *energy.*

4.8 Issuing Market Participant-Specific Day-Ahead Information

4.8.1 As soon as practicable after the *day-ahead market calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *day-ahead market calculation engine,* the *IESO* shall issue daily the following information to any appropriate *market participants* for the applicable *resources*:

4.8.1.1 a summary of the *dispatch data* submitted for the *day-ahead market* for the associated *resources;*

4.8.1.2 the calculated modelled data for *combined cycle plants;*

4.8.1.3 *day-ahead schedules* for *energy* and *operating reserve*;

4.8.1.4 *day-ahead operational commitments*;

4.8.1.5 schedules to provide *contracted ancillary services*;

4.8.1.6 any requirements to submit an *offer* or *bid* under a *reliability must-run contract*;

4.8.1.7 the *availability declaration envelopes*; and

4.8.1.8 a notice that there has been a failure of the conduct test and price impact test in accordance with section 14 of Appendix 7.5, if applicable.

5. The Pre-Dispatch Process

5.1 Pre-Dispatch Scheduling Process

5.1.1 The *IESO* shall determine *pre-dispatch schedules* in order to provide itself and *market participants* with advance information and projections necessary to plan the physical operation of the *electricity system*.

5.1.2 The *IESO* shall prepare a revised *pre-dispatch schedule* for each *dispatch day* whenever the *IESO* determines that changed circumstances have made the previous *pre-dispatch schedule* materially incorrect. A revised *pre-dispatch schedule* shall be determined only for *dispatch hours* following the changes that make it necessary.

5.1.3 Each time the *IESO* determines a *pre-dispatch schedule*, it shall also determine the associated projected *market prices* for *energy* and *operating reserve*.

5.2 Determining the Pre-Dispatch Schedule

5.2.1 The *IESO* shall use the *pre-dispatch calculation engine* with revised inputs reflecting the changes in conditions or projections to determine each *pre-dispatch schedule*.

5.2.2 The quantity for *energy* or *operating reserve* in a *registered market participant's pre-dispatch schedule* for a *boundary entity resource*, for any hour after the first two hours relative to the current *dispatch hour*, shall not exceed the corresponding quantity for that hour in the *registered market participant's day-ahead schedule* for the *boundary entity resource*. Notwithstanding the foregoing, the *IESO* may permit the quantity of any *energy* or *operating reserve* in a *registered market participant's pre-dispatch schedule* for a *boundary entity resource* to exceed the corresponding quantity for the hour in the *registered market participant's day-ahead schedule* for the *boundary entity resource*, in the following circumstances:

5.2.2.1 if the *IESO* determines that it is necessary to maintain *reliability*;

5.2.2.2 if the *IESO* declares a failure of the *day-ahead market*;

5.2.2.3 for *energy* scheduled to carry out (a) an *energy* import that is supported by a *system-backed capacity import resource* or a *generator-backed capacity import resource*, or (b) *called capacity export*; or

5.2.2.4 for the purpose of mitigating an over-generation condition.

5.2.3 Subject to sections 10.3.1 and 11.4.1, the *IESO* shall ensure that the scheduled output for a *resource* will meet or exceed its *minimum loading point* for all hours of its *day-ahead operational commitment*, or previous *pre-dispatch operational*

commitment in future iterations of the *pre-dispatch schedule* in accordance with section 4.3.6 of Appendix 7.5A.

5.3 Pre-Dispatch Scheduling Process Failure

5.3.1 If the *IESO* fails to produce valid results, the *IESO* may revise inputs to the *real-time calculation engine* as it considers appropriate based on the best available information, which may include but is not limited to:

5.3.1.1 the most recent valid *pre-dispatch schedule*; or

5.3.1.2 the most recent valid *day-ahead schedule*.

5.3.2 If the *IESO* fails to produce valid results, the *IESO* may direct and instruct *resources* to carry out actions consistent with the objectives of the *pre-dispatch process*, based on the best available information. Without limiting the generality of the foregoing, the *IESO* may issue *start-up notices*, notices of decommitment, and *pre-dispatch operational commitments*.

5.4 Administration of the Pre-Dispatch Calculation Engine

5.4.1 The *IESO* shall administer the *pre-dispatch calculation engine* in accordance with Appendix 7.5A.

5.5 Information Used by the Pre-Dispatch Calculation Engine

5.5.1 The *IESO* shall use the most current valid information in accordance with Appendix 7.5A and the applicable *market manuals* as inputs to the *pre-dispatch calculation engine.*

5.6 Passes of the Pre-Dispatch Calculation Engine

5.6.1 The *pre-dispatch calculation engine* shall determine commitments, schedules and prices over the pre-dispatch look-ahead period for *energy* and *operating reserve* in accordance with section 2.1 of Appendix 7.5A. The *pre-dispatch calculation engine* shall execute the Pre-Dispatch Scheduling Process Pass as described in section 7 of Appendix 7.5A.

5.7 Publishing Pre-Dispatch Information

Hourly Information

5.7.1 As soon as practicable after the *pre-dispatch calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *pre-dispatch calculation engine*, the *IESO* shall *publish* hourly the following information in respect of the *pre-dispatch process*:

5.7.1.1 *locational marginal prices* for *energy* and *operating reserve* in the *IESO control area*;

5.7.1.2 *virtual zonal prices*;

5.7.1.3 the pre-dispatch *Ontario zonal price*;

5.7.1.4 *locational marginal prices* for *energy* and *operating reserve* for each *intertie zone*;

5.7.1.5 the forecast of expected total system load, total system losses, available *energy*, and *operating reserve* requirements for the forecast period;

5.7.1.6 any area *operating reserve* shortfalls;

5.7.1.7 a list of the network constraints and *security* constraints that affected the *pre-dispatch schedule*;

5.7.1.8 area *operating reserve* constraints; and

5.7.1.9 *intertie* scheduling limits.

Daily Reports

5.7.2 The *IESO* shall *publish* daily the updated cumulative *locational marginal prices* for hourly *energy* and *operating reserve* in respect of the *pre-dispatch process*.

Other Information

5.7.3 The *IESO* shall *publish* the daily *dispatch* order determined randomly by the *IESO* in accordance with section 3A.1.1 for *variable generation resources* at least once each calendar month in accordance with the applicable *market manual.*

5.7.4 The *IESO* shall *publish* a summary of the hours in the day prior to the relevant *dispatch day* related to global market power conditions for *energy* that meet the conditions in section 10.5.1 of Appendix 7.5A on the day following the relevant *dispatch day*.

5.8 Issuing Market Participant-Specific Pre-Dispatch Information

5.8.1 The most recently issued *pre-dispatch schedule* shall supersede all previous *pre-dispatch schedules* for the same *dispatch hours*.

Hourly Information

5.8.2 As soon as practicable after the *pre-dispatch calculation engine* produces valid results, and, for the avoidance of doubt, there is not a failure of the *pre-dispatch calculation engine*, the *IESO* shall issue hourly the following information in respect of the *pre-dispatch process* to any appropriate *market participants* for the applicable *resources*:

5.8.2.1 the *interchange schedules* for *energy* and *operating reserve*;

5.8.2.2 *extended pre-dispatch operational commitments*;

5.8.2.3 the *pre-dispatch schedules* for *energy* and *operating reserve*;

5.8.2.4 *stand-alone pre-dispatch operational commitments*;

5.8.2.5 *advanced pre-dispatch operational commitments*;

5.8.2.6 the *minimum generation block down-times* used by the *pre-dispatch calculation engine* to infer the *thermal state*;

5.8.2.7 for each *dispatch hour*, the aggregate *reliability must-run resources* that the *IESO* has directed to submit *offers* or *bids*;

5.8.2.8 schedules to provide *contracted ancillary services*;

5.8.2.9 any requirements to submit an *offer* or *bid* under a *reliability must-run contract*;

5.8.2.10 the calculated modelled data for *combined cycle plants;*

5.8.2.11 a notice that there has been a failure of the conduct test and price impact test in accordance with section 14 of Appendix 7.5A, if applicable;

5.8.2.12 the cumulative *energy* schedules relative to the *minimum daily energy limit* and *maximum daily energy limit*; and

5.8.2.13 the actual and forecast number of starts.

Other Information

5.8.3 The *IESO* shall issue to any appropriate *market participants* as soon as practicable, the approval or rejection of an *availability declaration envelope* expansion request.

6. The Real-Time Market

6.1 Real-Time Market Scheduling Process

6.1.1 The *IESO* shall determine *real-time schedules* and use these as the primary determinant for the physical operation of *resources* specified in section 7.1.1A.

6.1.2 The *IESO* shall determine a *real-time schedule,* for *dispatchable generation resources*, *dispatchable electricity storage resources*, and *dispatchable loads*, for every *dispatch interval* two minutes before the *dispatch interval* to which it applies.

6.1.3 The *IESO* shall determine, for a *registered market participant*, the *real-time schedule* for a *boundary entity resource*, consisting of an *interchange schedule* for each *dispatch hour* using the outcome of the *pre-dispatch schedule* determined as at the preceding *dispatch hour* and modified as required by the *IESO*.

6.1.4 Where the *IESO* modifies an *interchange schedule* during the *dispatch hour*, it shall assign an *interchange schedule* value for each *dispatch interval* of the impacted *dispatch hour* to reflect any modifications.

6.2 Determining the Real-Time Schedule

6.2.1 The *IESO* shall use the information described in greater detail in the applicable *market manual* and Appendix 7.6 to determine a *real-time schedule* for each *dispatch interval* as follows:

6.2.1.1 *interchange schedule data* shall be input as constant values for the given *dispatch hour* unless otherwise specified by the *IESO* and shall be derived in accordance with the outputs of *the pre-dispatch calculation engine* for each *dispatch hour* as determined under Appendix 7.5A;

6.2.1.2 *intertie* flows at the beginning of each *dispatch interval* shall be set at the *IESO's* best estimate of their actual values, as determined from real-time system data or applicable *interchange schedules* to reflect actual unscheduled flows; and

6.2.1.3 *intertie* flows at the end of each *dispatch interval* at the value ascribed to such flows in the relevant *interchange schedule.*

6.3 Administration of the Real-Time Calculation Engine

6.3.1 The *IESO* shall administer the *real-time calculation engine* in accordance with Appendix 7.6.

6.4 Information Used by the Real-Time Calculation Engine

6.4.1 The *IESO* shall use the most current valid information in accordance with Appendix 7.6 and the applicable *market manuals* as inputs to the *real-time calculation engine.*

6.5 Passes of the Real-Time Calculation Engine

6.5.1 The *real-time calculation engine* shall determine schedules and prices over the real-time look-ahead period for *energy* and *operating reserve*. The *real-time calculation engine* shall execute the Real-Time Scheduling and Pricing Pass as described in section 7 of Appendix 7.6;

6.6 Publishing Real-Time Information

Five-minute Information

6.6.1 As soon as practicable after the *real-time calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *real-time calculation engine*, the *IESO* shall *publish* the following information:

6.6.1.1 *locational marginal prices* for *energy* and *operating reserve* in the *IESO control area*;

6.6.1.2 *virtual zonal prices*;

6.6.1.3 the *real-time market Ontario zonal price;*

6.6.1.4 *locational marginal prices* for *energy* and *operating reserve* for each *intertie zone*; and

6.6.1.5 the total *energy* and *operating reserve* in *real-time schedules*, the total system load and total system losses, and Ontario *demand.*

Hourly Information

6.6.2 As soon as practicable after the start of the next *dispatch hour* after the *real-time calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *real-time calculation engine*, the *IESO* shall *publish* the following information for each *dispatch interval* of that *dispatch hour*:

6.6.2.1 any area *operating reserve* shortfalls;

6.6.2.2 a list of network and *security* constraints that affected the *real-time schedule;*

6.6.2.3 the total import and export schedules and actual flows of *energy* between the *IESO-controlled grid* and each *intertie zone;* and

6.6.2.4 total *operating reserve* scheduled, and total *energy* from such *operating reserve,* by area.

6.6.3 The *IESO* shall, within one hour after each *dispatch hour*, *publish* information concerning system results and events during that *dispatch hour*. This information shall include, but is not limited to:

6.6.3.1 transmission capacity between the *IESO-controlled grid* and each *intertie zone*; and

6.6.3.2 any *outages* of transmission *facilities.*

Other information

6.6.4 The *IESO* shall *publish* the shadow prices for the binding constraints that are used to generate *locational marginal prices* by the *real-time calculation engine* no sooner than five days after the *trading date.*

Monthly Reports

6.6.5 The *IESO* shall no less than once in each calendar month, *publish* a report listing and giving reasons for all significant differences between *dispatch instructions* issued and the results of the *real-time calculation engine*.

6.6.6 The *IESO* shall *publish* the daily *dispatch* order determined randomly by the *IESO* in accordance with section 3A.1.1 for *variable generation resources* at least once each calendar month in accordance with the applicable *market manual.*

6.7 Issuing Market Participant-Specific Real-Time Information

Five-minute Information

6.7.1 As soon as practicable after the *real-time calculation engine* produces valid results, and for the avoidance of doubt, there is not a failure of the *real-time calculation engine*, the *IESO* shall issue:

6.7.1.1 *real-time schedules* for *energy* and *operating reserve* for each *dispatch interval*; and

6.7.1.2 the schedule to provide *contracted ancillary services*.

Hourly Information

6.7.2 The *IESO* shall, within one hour after each *dispatch hour*, issue the following information to any appropriate *market participants* for the applicable *resources:*

6.7.2.1 a summary of *dispatch instructions* for that *dispatch hour* related to *energy* and *operating reserve;* and

6.7.2.2 the calculated modelled data for *combined cycle plants* used by the *real-time calculation engine.*

6.7.3 For each *boundary entity resource* in respect of which the *dispatch instructions* for a given *dispatch hour* provides for the *dispatch* of more than 0 MW or for a reduction to 0 MW relative to the previous *dispatch hour*, the *IESO* shall, as soon as practical and consistent with relevant *reliability standards,* but no later than the start of the *dispatch hour* to which it relates, issue the following information for each such *boundary entity resource* to the appropriate *registered market participant* for that *boundary entity resource:*

6.7.3.1 the *interchange schedule* for *energy* and *operating reserve* for that *resource*; and

6.7.3.2 any request of that *resource* to submit an *offer* or *bid* under a *reliability must-run contract* and the schedule to provide *contracted ancillary service*s.

Daily Information

6.7.4 The *IESO* shall issue daily to any appropriate *market participants*, following the *dispatch day*, the summary of the *dispatch data* used by the *real-time calculation engine*.

7. IESO Dispatch Instructions

7.1 Purpose and Timing of Dispatch Instructions

7.1.1 The *IESO* shall determine *dispatch instructions* for each ~~*registered facility*~~*resource* as described in this section 7, as the primary means of coordinating the real-time operation of the *electricity system*.

7.1.1A The *IESO* shall only issue *dispatch instructions* for a *physical service* to ~~*a registered facility*~~*dispatchable generation resources, dispatchable loads,* or *dispatchable storage resources*, and, to the extent authorized by the *market rules, resources* other than ~~*a boundary entity*~~ *resources* for a given *dispatch interval* when there is a change in the quantity of a *physical service* to be scheduled from that ~~*registered facility*~~*resource* during that *dispatch interval* relative to the last *dispatch instruction* issued to the ~~*registered facility*~~*resource* and with which the *registered market participant* has confirmed compliance with the last *dispatch instruction* in accordance with section 7.1.2 and 7.1.2A.

7.1.1B Where the *IESO*:

7.1.1B.1 is not required to issue a *dispatch instruction* ~~at~~to a ~~*registered facility* other than a *boundary entity*~~*resource* specified in section 7.1.1A for a given *dispatch interval* by virtue of section 7.1.1A or 7.2.1A; or

7.1.1B.2 for any reason fails to issue a *dispatch instruction* to a ~~*registered facility* other than a *boundary entity*~~*resource* specified in section 7.1.1A for a given *dispatch interval*,

subject to section 7.1.1B1, the last *dispatch instruction* issued to the ~~*registered facility*~~*resource* and with which the *registered market participant* has confirmed compliance in accordance with sections 7.1.2 and 7.1.2A shall, for all purposes under these *market rules* but subject to section 7.1.4 and 7.4.3, be deemed to be the *dispatch instruction* issued for that *dispatch interval* for that ~~*registered facility*~~*resource*.

7.1.1B1 ~~For a *variable generator* that is a *registered market participant*, section~~Section 7.1.1B shall apply until the *registered* ~~*facility*~~*market participant* for a *variable generation resource* is issued a *release notification*.

7.1.1C Notwithstanding the identification of a portion of the ~~consumption at~~ *energy* to be consumed by a *dispatchable load* as a ~~*registered facility*~~*non-dispatchable load* under section 3.3.3.1~~18 as *non-dispatchable load*~~, the *IESO* shall issue *dispatch instructions* in accordance with the applicable *market manual* to that ~~*registered facility*~~*resource* including that portion that has been identified pursuant to section 3.3.3.1~~18 as *non-dispatchable load*~~.

7.1.2 Subject to section 7.1.1A, the *IESO* shall issue *dispatch instructions* for each ~~*registered facility*, other than a *boundary entity*~~*resource* specified in section 7.1.1A, for which a *dispatch instruction* is required no later than the start of each *dispatch*

interval or, where section 7.1.4 or 7.4.3 applies, within a *dispatch interval*. The *IESO* shall:

~~7.1.2.1 [Intentionally left blank]~~

7.1.2.1~~2~~ issue such *dispatch instructions* using the systems and protocols defined in the applicable *market manual*; and

7.1.2.2~~3~~ record and time-stamp all such *dispatch instructions*, store such records for at least seven years and make such records available for purposes of audit and dispute resolution in accordance with these *market rules*.

7.1.2A Each *registered market participant* shall:

7.1.2A.1 acknowledge receipt of; and

7.1.2A.2 confirm its intention to comply or not to comply with,

each *dispatch instruction* issued to it in accordance with section 7.1.2 in respect of each of its ~~*registered facilities*, other than a *boundary entity*~~*resources*, using the systems and protocols defined in the applicable *market manual* and within the time required by such *market manual*.

7.1.2A1 The *IESO* shall issue a *release notification* to ~~a *variable generator* that is~~ a *registered market participant* for a *variable generation resource* if the ~~*registered facility*~~*resource* is not required to be at or below forecasted output. Each *registered market participant* for a *variable* ~~*generator*~~*generation resource* shall acknowledge receipt of each *release notification* using the systems and protocols defined in the applicable *market manual* and within the time required by such *market manual*.

7.1.2B Confirmation by a *registered market participant* of its intention not to comply with a *dispatch instruction* pursuant to section 7.1.2A shall constitute non-compliance with the *dispatch instruction* by the *registered market participant* for all purposes under these *market rules*, including but not limited to section 7.5.

7.1.2C Where a *registered market participant* ~~has for a *registered facility* that is~~associated with a *dispatchable load* has identified ~~pursuant to section 3.3.18~~ all or a portion of ~~that *registered facility's* consumption~~the *energy* to be consumed at that *resource* as *non-dispatchable load* under section 3.3.3.1 and the *IESO* has issued a *dispatch instruction* requiring a reduction of such non-dispatchable consumption pursuant to section 7.1.1C, the *registered market participant* shall confirm its intention not to comply with each such *dispatch instruction* in accordance with section 7.1.2A and the applicable *market manual*.

7.1.2D Confirmation by a *registered market participant* of its intention not to comply with a *dispatch instruction* pursuant to section 7.1.2C shall not constitute non-compliance with the *dispatch instruction* by the *registered market participant* for all purposes under these *market rules*, including but not limited to section 7.5.

7.1.3 The *IESO* shall issue *dispatch instructions*, for greater certainty, in the form of *interchange schedules*, for each ~~*registered facility* that is a~~ *boundary entity* *resource*, for which a *dispatch instruction* is required prior to each *dispatch hour*. The *IESO* shall:

7.1.3.1 [Intentionally left blank]

7.1.3.2 issue such *dispatch instructions* using the systems and protocols defined in the applicable *market manual*; and

7.1.3.3 record and time-stamp all such *dispatch instructions,* store such records for at least seven years and make such records available for purposes of audit and dispute resolution in accordance with these *market rules*.

7.1.3A Each *registered market participant* shall acknowledge receipt of each *dispatch instruction* issued to it in accordance with section 7.1.3 in respect of each of its ~~*registered facilities* that is a~~ *boundary entity* *resources* using the systems and protocols defined in the applicable *market manual* and within the time required by such *market manual*.

~~7.1.3B [Intentionally left blank – section deleted]~~

~~7.1.3B.1 [Intentionally left blank – section deleted]~~

~~7.1.3B.2 [Intentionally left blank – section deleted]~~

~~7.1.3C [Intentionally left blank – section deleted]~~

7.1.4 The *IESO* may issue *dispatch instructions* within the *dispatch interval*, instructing any ~~*registered facility*~~*resource* with a valid *energy offer* or *bid*, to increase or decrease *energy* production or consumption as specified in its *offers* or *bids* for *energy*. When a *dispatch instruction* is issued within a *dispatch interval* pursuant to this section 7.1.4, the last *dispatch instruction* for *energy* or each class of *operating reserve,* as the case may be, shall be the sole *dispatch instruction* used for *settlement* purposes for that *dispatch interval.*

7.1.5 Where a *contingency event* is occurring or has occurred, the *IESO* may temporarily cease issuing *dispatch instructions* in the manner otherwise required by section 7.1.2. In such cases, *registered market participants* shall comply with section 7.~~3.3~~ 1.1B or 7.4.3, as the case may be.

7.1.6 The *IESO* shall, on a ~~best~~reasonable efforts basis, determine and issue *dispatch* advisories for each ~~*registered*~~ *dispatchable* ~~*facility*~~*resource*, for information purposes only. *Dispatch* advisories are determined and issued every 5 minutes to each ~~*registered*~~ *dispatchable* ~~*facility*~~*resource* to provide an indication of potential future *dispatch instructions* and *operating reserve* schedules.

7.2 Information Used to Determine Dispatch Instructions

7.2.1 ~~The~~Subject to 7.2.1A, the *IESO* shall use ~~its best endeavours~~ reasonable efforts to ensure that the *dispatch instructions* issued with respect to each ~~*registered facility, that is not a boundary entity*~~*resource* specified in section 7.1.1A, for each *dispatch interval* ~~closely approximate~~, are consistent with the most recent *real-time schedule* for that ~~*registered facility*~~*resource* and *dispatch interval*.

7.2.1A The *IESO* ~~may, however,~~shall not be required to issue *dispatch instructions* ~~that depart from the *real-time schedule*~~, or, in the event that the *IESO* does issue *dispatch instructions*, shall not be required to satisfy the requirements of section 7.2.1 if:

7.2.~~1~~1A.1 the *security* and *adequacy* of the system would be endangered by implementing the most recent *real-time schedule*;

7.2.~~1~~1A.2 the ~~*dispatch algorithm*~~*real-time calculation engine* has failed, or has produced a *real-time schedule* that is clearly and materially in error;

7.2.~~1~~1A.3 material changes have occurred subsequent to the *IESO's* determination of the most recent *real-time schedule*, including ~~such as~~ a failure of an element of a *transmission system* or failure of a ~~*registered facility*~~*resource* to follow *dispatch instructions*~~, have occurred~~; or

7.2.~~1~~1A.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13.

7.2.2 If the *IESO* anticipates that an over-generation or an under-generation condition may occur, it shall issue advisory notices in accordance with section 12.1 but shall continue using the procedures described in sections 4, 5 and 6 to determine *day-ahead schedules*, *pre-dispatch schedules*, *real-time schedules* and the associated ~~projected and~~ *market prices* ~~and *market schedules*.~~.

7.2.3 If the *IESO* determines prior to issuing *dispatch instructions* that the market responses to the ~~projected or~~ *market prices* will be sufficient to eliminate the over-generation or under-generation condition, the *IESO* shall take no *emergency* action and shall issue advisory notices so indicating.

7.2.4 If the *IESO* determines prior to issuing *dispatch instructions* that market responses will not eliminate the over-generation or under-generation condition, it shall declare an *emergency operating state* to resolve the conditions in accordance with section 7.7.

7.2.5 ~~The~~ Subject to section 7.2.5A, the *IESO* shall use ~~its best endeavours~~reasonable efforts to ensure that the *dispatch instructions* issued with respect to each ~~*registered facility, that is a boundary entity*~~ *resource*, for each *dispatch hour* ~~reflect~~are consistent with the *pre-dispatch schedule* for that *dispatch hour* as determined in accordance with section 6.1.3 ~~of Chapter 7~~.

7.2.5A The *IESO* ~~may, however,~~shall not be required to issue *dispatch instructions* ~~that depart from the *pre-dispatch schedule* if:~~, or, in the event that the *IESO* does issue *dispatch instructions*, shall not be required to satisfy the requirements of section 7.2.5 if:

7.2.5A.1 the *security* and *adequacy* of the system would be endangered by implementing the *pre-dispatch schedule*;

7.2.5A.2 the *pre-dispatch* ~~*algorithm*~~ *calculation engine* has failed, or has produced a *pre-dispatch schedule* that is clearly and materially in error;

7.2.5A.3 material changes have occurred subsequent to the *IESO's* determination of the *pre-dispatch schedule*, including a ~~such as~~ failure of an element of a *transmission system* or failure of a ~~*registered facility*~~*resource* to follow *dispatch instructions*~~, have occurred~~; ~~or~~

7.2.5A.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13; ~~or~~

7.2.5A.5 an external *control area operator* calls a *called capacity export* in accordance with section 20~~.~~; or

7.2.5A.6 the *interchange schedule* violates the net *interchange schedule* limit.

7.3 The Content of Dispatch Instructions

7.3.1 The *IESO* shall, subject to section 7.1.1A, issue *dispatch instructions* for each *dispatch interval* to each ~~*registered facility* that is a not a *boundary entity*~~*resource* specified in section 7.1.1A indicating for that *dispatch interval*:

7.3.1.1 the rate at which *energy* is to be injected into or withdrawn from the *IESO-controlled grid* (in MW) at the end of the *dispatch interval*;

7.3.1.2 the amount of each class of *operating reserve* that is to be in a condition to respond to a *dispatch instruction* issued pursuant to section 7.4.3 calling for additional *energy* production; and

7.3.1.3 the amount of *reactive support* and *regulation* that is to be provided under *contracted ancillary service* contracts or *reliability must-run contracts* or as a consequence of any requirement to provide same which derives from the application of these *market rules*.

7.3.2 The *dispatch instructions* for any ~~registered facility that is not a boundary entity~~ *resource* specified in section 7.1.1A shall:

7.3.2.1 be consistent with the current operating status of that ~~*registered facility*~~*resource* and with any operational constraints described in the most recent *dispatch data* submitted by the *registered market participant* for that ~~*registered facility*~~;*resource*; and

7.3.2.2 be used by the *IESO* for the purpose of declaring the ~~*registered facility*~~*resource* as non-conforming in accordance with section 7.5.4~~; and~~.

~~7.3.2.3 subject to Appendix 7.6, be used in the *IESO settlement process* for determining any *settlement amounts* for congestion management pursuant to section 3.5 of Chapter 9.~~

7.3.3 [Intentionally left blank – section deleted]

7.3.4 The *IESO* shall issue *dispatch* instructions for each *dispatch hour* to each ~~registered facility that is a~~ *boundary entity* *resource*, indicating for that *dispatch hour*:

7.3.4.1 the rate at which *energy* is to be injected into or withdrawn from the *IESO-controlled grid* (in minutes) from the specified *intertie zone*, which rate shall be consistent with all relevant *reliability standards*;

7.3.4.2 the amount of each class of *operating reserve* that is scheduled and the ramp rates associated with the *energy* if called on; and

7.3.4.3 the amount of *reactive support* and *regulation* that is to be provided under *reliability must-run contracts* or as a consequence of any requirement to provide same which derives from the application of these *market rules.*

7.3.5 The ~~dispatch instructions~~*dispatch instructions* for any ~~registered facility that is a~~ *boundary entity* *resource* shall:

7.3.5.1 be consistent with the current *dispatch data* for that ~~*registered facility*~~*resource* and with any *interconnection* limitations associated with the ~~*registered facility*~~; and*resource.*

~~7.3.5.2 be used in the *IESO settlement process* for determining any *settlement amounts* for congestion management pursuant to section 3.5 of Chapter 9.~~

~~7.3.6 [Intentionally left blank – section deleted]~~

7.4 IESO Dispatch of Operating Reserve

7.4.1 The *IESO* shall:

7.4.1.1 subject to section 7.1.1A, issue to each ~~*registered facility*~~, ~~other than a *boundary entity*~~,*resource* specified in section 7.1.1A, which has made an *offer* for the delivery of *operating reserve* for a particular *dispatch hour*, *dispatch instructions* for each *dispatch interval* consistent with the results of the ~~*dispatch algorithm*~~*real-time calculation engine* and the procedures detailed in section~~s~~ 6~~.2 to 6.4~~, instructing the *registered market participant* responsible for that ~~*registered facility*~~*resource* as to the quantity of *operating reserve* that is to be provided by that ~~*registered facility*~~*resource* in that *dispatch interval*; and

7.4.1.2 issue to each ~~*registered facility,* that is a~~ *boundary entity* *resource*, which has made an *offer* for the delivery of *operating reserve* for a particular *dispatch hour*, *dispatch instructions* for that *dispatch hour* consistent with the results of the *pre-dispatch* ~~*algorithm*~~*calculation engine* and the procedures detailed in section~~s~~ 6~~.1 to 6.4~~, instructing the *registered market participant* responsible for that ~~*registered facility*~~*resource* as to the quantity of *operating reserve* to be provided by that ~~*registered facility*~~*resource* in that *dispatch hour.*

7.4.2 Each ~~*registered facility*~~*resource* to which section 7.4.1 applies shall maintain unused *generation capacity, electricity storage capacity,* or load reduction capacity during that *dispatch interval*, consistent with the *dispatch instructions* issued to it under these *market rules*, so as to be able to increase *energy* production or reduce *energy* withdrawal as soon as possible upon being instructed to do so by the *IESO* pursuant to section 7.4.3.

7.4.2.1 A *market participant* shall be subject to the *operating reserve* non-accessibility charge *settlement amount* in accordance with MR Ch.9 s.3.10~~non-accessibility charges~~ if it fails to maintain unused *generation capacity, electricity storage capacity,* or load reduction capacity equal to or greater than its total amount of scheduled *operating reserve* during any *interval* in which it is scheduled to provide *operating reserve* but is not *dispatched* to increase *energy generation* or reduce *energy* withdrawal pursuant to section 7.4.3. The *market participant* may also be subject to compliance actions in accordance with MR Ch.3 s.6~~section 6 of Chapter 3~~.

7.4.3 Where a *contingency event* has occurred or is occurring, the *IESO* may issue *dispatch instructions* within the *dispatch interval*, instructing a ~~*registered facility,* other than a *boundary entity*~~*resource* specified in section 7.1.1A, providing *operating reserve* to begin increasing *energy* production or reducing *energy* withdrawal as specified in its *offers* of *operating reserve*. *Dispatch instructions* issued in respect of a ~~*registered facility* that is a~~ *boundary entity* *resource* providing *operating reserve* shall be such as to ensure that the *energy* associated with each *offer* of *operating reserve* is scheduled by the *IESO* in a manner consistent with all relevant *reliability standards* for activation of *operating reserve* and as agreed upon by the entity scheduling the resulting *energy* transfer.

7.4.4 The *IESO* shall, when *dispatching* ~~*registered facilities*~~*resources* providing *operating reserve* to produce *energy* pursuant to section 7.4.3, call first on the ~~*registered facility*~~*resource* in each area that has *offered* the lowest price (in $/MWh) for *energy* produced from scheduled *operating reserve* in that area. If such ~~*registered facility*~~*resource* is instructed to produce *energy* but does not do so as rapidly as instructed, or if the *IESO* needs additional *energy* from *operating reserve* in that area, the *IESO* shall call upon the ~~*registered facility*~~*resource* *offering* the next-lowest price for *energy* from *operating reserve*. If the *IESO* determines that calling upon ~~*registered facilities*~~*resources* in strict order of increasing price of *energy* would mean that it would be unable to respond in a timely fashion to a contingency for which the *IESO* would issue a *dispatch instruction* pursuant to section 7.4.3, the *IESO* may call

upon ~~*registered facilities*~~*resources* out of such strict order but shall as far as is practical call ~~*registered facilities*~~*resources* to reflect the intent of this section 7.4.4.

7.4.5 When *operating reserves* are activated as a result of a *contingency event*, the otherwise applicable *ten-minute operating reserve* requirements shall be reduced by a corresponding amount and shall subsequently be recovered to pre-contingency levels in a manner consistent with MR Ch.5 s~~ections~~s. ~~4~~4.5.10 and 4.5.21 ~~of Chapter 5~~.

7.4.6 A *market participant*~~*registered facility*~~ that failed to maintain unused *generation* (or load reduction) *capacity* equal to or greater than their total amount of scheduled *operating reserve* ~~is~~ shall be subject to the real-time make-whole payment reversal *settlement amount* and the real-time *generator offer* guarantee claw back *settlement amount* in accordance with MR Ch.9 s.3.10. ~~not entitled to any inappropriate congestion management *settlement* credits determined in accordance with section 3.5.2 of Chapter 9. The *IESO* may withhold or recover such congestion management *settlement* credits and shall redistribute any recovered payments in accordance with section 4.8.2 of Chapter 9.~~

7.5 Compliance with Dispatch Instructions

7.5.1 Each *registered market participant* shall ensure that each of its ~~*registered facilities*~~*resources* complies with *dispatch instructions* issued to it under these *market rules*. Without limiting the generality of MR Ch.3 s.6.2~~section 6.2 of Chapter 3~~, non-compliance with *dispatch instructions* other than for the reasons referred to in section 7.5.3 shall be a breach of the *market rules* and may be sanctioned in accordance with MR Ch.3 s.6.2~~section 6.2 of Chapter 3~~ and with this section 7.5.

7.5.2 A *registered market participant* that expects its ~~*registered facility, other than a boundary entity*~~*resource* specified in section 7.1.1A, to operate in a manner that, for any reason, differs materially from the *dispatch instructions* issued to it in accordance with these *market rules* shall so notify the *IESO* as soon as possible. The *IESO* shall ~~issue~~*publish* guidelines defining when a difference is material and how notice shall be provided for the purposes of this section 7.5.2 and of section 7.5.3.

7.5.3 Compliance with a *dispatch instruction* for a ~~*registered facility* other than a *boundary entity*~~*resource* specified in section 7.1.1A, is not required if such compliance would endanger the safety of any person, damage equipment, or violate any *applicable law*. A *market participant* that departs from *dispatch instructions* for any such reason shall so notify the *IESO* in accordance with section 7.5.2.

7.5.4 If failure by a ~~*registered facility, other than a boundary entity*~~*resource* specified in section 7.1.1A, to comply with a dispatch instruction endangers *electricity system reliability*, the *IESO* shall declare the ~~*registered facility*~~*resource* to be non-conforming and shall take any actions allowed by sections 7.5.~~6~~6 to 7.5.7 or any other provisions of these *market rules* which the *IESO* determines appropriate.

~~7.5.4A [Intentionally left blank – section deleted]~~

7.5.5 ~~Subject to section 7.5.5A, if a *registered facility* other than a *boundary entity* produces or withdraws more or less *energy* in a *dispatch interval* than implied by a valid *dispatch instruction* issued by the *IESO*, the *IESO* shall, for pricing and *settlement* purposes:~~

~~7.5.5.1 treat the difference in *energy* production or withdrawal as a change in *non-dispatchable load* at its location , in accordance with sections 4.4.3.2, and 6.4.2.6; and~~

~~7.5.5.2 use any trade-off curves between *energy* and *operating reserves* in the *dispatch data* for that *registered facility* to determine an appropriate adjustment in the quantity of *operating reserve* of each class supplied by the *registered facility*.~~[Intentionally left blank – section deleted]

~~7.5.5A Section 7.5.5 shall not apply until such time that locational pricing is implemented in the *IESO-administered markets*.~~

7.5.6 If the *IESO* declares a ~~*registered facility* other than a *boundary entity*~~*resource* to be non-conforming under section 7.5.4:

7.5.6.1 the *IESO* shall require the *registered market participant* for that ~~*registered facility*~~ *resource* to explain the reason for the non-compliance and shall record the response;

7.5.6.2 if the *IESO* determines that the ~~*registered facility*~~*resource* is physically incapable of implementing the *dispatch instructions*, the *IESO* may require revision in the registration information for the non-conforming ~~*registered facility*~~*resource*; and

7.5.6.3 if the *IESO* is not satisfied that the ~~*registered facility*~~*resource* will respond to future *dispatch instructions*, the *IESO* may direct the ~~*registered facility*~~*resource* to follow, as closely as practicable, an output or withdrawal profile specified by the *IESO*, and shall thereafter represent the ~~*registered facility*~~*resource* as a *self-scheduling generation* ~~*facility*~~*resource*, *self-scheduling electricity storage* ~~*facility*~~ *resource* or *non-dispatchable load* having the specified profile until the non-conforming ~~*registered facility*~~*resource* satisfies the *IESO* that it has remedied the conditions causing the non-conformance.

7.5.7 Until the *registered market participant* for a non-conforming ~~*registered facility*~~*resource* responds to the requirements of this section 7.5 to the satisfaction of the *IESO*, such ~~*registered facility*~~*resource* shall continue to be designated as non-conforming, and such failure to respond on the part of that *registered market participant* may be referred by the *IESO* to the *market surveillance panel* at any time.

7.5.8 The *IESO* shall assume that a ~~*registered facility* that is a~~ *boundary entity* *resource* will comply fully with all *dispatch instructions* for *energy* or *operating reserves* upon

confirmation of the relevant *interchange schedule* with the appropriate scheduling entity.

7.5.8A A *registered market participant* associated with a ~~*registered facility* that is a~~ *boundary entity* *resource* shall, other than for the bona fide and legitimate reasons referred to in section 7.5.8B, schedule *energy* and *operating reserve*, in accordance with section 6.1.3, with the appropriate scheduling entity, or scheduling entities as the case may be.

7.5.8B The *IESO* may take actions pursuant to MR Ch. 3 s.~~ection~~ 6.6.10A ~~of Chapter 3~~ and shall assess a real-time import or export failure charge as determined in MR Ch.9 ~~section~~ s.3.~~8C~~7 ~~of Chapter 9~~ where a *registered market participant* associated with a ~~*registered facility* that is a~~ *boundary entity* *resource* fails to schedule *energy* or *operating reserve*, in accordance with section 6.1.3 ~~of Chapter 7~~, with the appropriate scheduling entity, or scheduling entities as the case may be, according to the applicable *interchange schedule*, other than for bona fide and legitimate reasons as determined by the *IESO.* Bona fide and legitimate reasons shall include failures caused by actions and circumstances beyond the control of the *market participant* or due to *IESO* or external scheduling entity error or action, including those reasons specified in the applicable *market manual*.

7.5.9 In addition to any other sanction or consequence provided for in these *market rules*, the *IESO* may disqualify from future participation in the *operating reserve market* any ~~*registered facility*~~ *resource* that consistently fails to increase *energy* generation or reduce *energy* withdrawal when called upon in accordance with Chapter 7.

7.6 Dispatch Scheduling Errors

7.6.1 A *dispatch scheduling error* shall be deemed to have occurred if either:

7.6.1.1 an *arbitrator* determines that the *IESO* has made a *dispatch scheduling error*; or

7.6.1.2 the *IESO* declares that it has made a *dispatch scheduling error*, on its own initiative, including pursuant to MR Ch.9 s.6.9~~section 6.9 of Chapter 9,~~ or further to a *notice of disagreement* filed or other *settlement* dispute initiated by a *market participant* pursuant to MR Ch.9 ss.6.8 or 6.10~~section 6.8, or 6.10 of Chapter 9~~.

7.6.2 When a *dispatch scheduling error* has occurred, the *IESO* shall not adjust *market prices* but shall, subject to section 7.6.3 and notwithstanding MR Ch.1 s.~~section~~ 13.1.2 ~~of Chapter 1~~, be strictly liable to compensate a *market participant* for damages suffered by the *market participant* as a result of the *dispatch scheduling error,* assessed in accordance with MR Ch.1 s.~~section~~ 13.1.4 ~~of Chapter 1~~.

7.6.3 A *market participant* that wishes to claim compensation pursuant to section 7.6.2 shall:

7.6.3.1 where the *dispatch scheduling error* was determined to have been made pursuant to section 7.6.1.1, request the *arbitrator* to determine the *market participant's* entitlement to and amount of, if any, such compensation; and

7.6.3.2 where the *dispatch scheduling error* was determined to have been made pursuant to section 7.6.1.2, request that the *IESO* determine the *market participant's* entitlement to and amount of, if any, such compensation,

with the amount, if any, in either case being determined in accordance with section 7.6.4.

7.6.4 Any amount determined by an *arbitrator* or by the *IESO,* as the case may be, pursuant to section 7.6.3 or 7.6.5 shall be assessed in accordance with MR Ch.1 s.~~section~~ 13.1.4 ~~of Chapter 1~~ and shall exclude such amount as may be required to account for any ~~congestion management *settlement* credit~~ applicable *day-ahead market* and *real-time market* make-whole payment *settlement amounts* triggered by the relevant *dispatch scheduling error* and already credited to the *market participant.*

7.6.5 If a *market participant* wishes to dispute a determination made by the *IESO* pursuant to section 7.6.3.2, it shall submit the matter to the dispute resolution process set forth in MR Ch.3 s.2~~section 2 of Chapter 3~~ and shall, if the good faith negotiations referred to in MR Ch.3 s.2.5.3A and 2.5.3B ~~section 2.4 of that Chapter~~ fail to resolve the matter, request in the *notice of dispute* that the *arbitrator* determine the *market participant's* entitlement to the compensation referred to in section 7.6.2, the amount, if any, of such compensation or both, as the case may be.

7.7 Additional IESO Powers in Emergency and High-Risk Conditions

7.7.1 During real-time operations, the *IESO* is responsible for declaring an *emergency operating state* or a *high-risk operating state* under circumstances described in MR Ch.5 ss.2.3 and 2.4 ~~sections 2.3 and 2.4 of Chapter 5~~.

7.7.2 The *IESO's* primary responsibility in an *emergency operating state* or a *high-risk operating state* is to preserve system *reliability*, with a secondary responsibility to restore normal system conditions and operation of the *IESO-administered markets* as soon as practicable.

7.7.3 Where an *emergency operating state* or a *high-risk operating state* has been declared, the *IESO* may implement any of the actions detailed in MR Ch.5 ss.2.3, 2.4, 5.8 and 5.9~~sections 2.3, 2.4, 5.8 and 5.9 of Chapter 5~~.

7.7.4 The *IESO* may determine any additional compensation payable in respect of *physical services* acquired during an *emergency operating state* or a *high-risk operating state*.

~~7.8 Publication of Real-Time Dispatch Information~~

~~7.8.1 The *IESO* shall, within one hour after each *dispatch hour*, *publish* information concerning system results and events during that *dispatch hour*. This information shall include, but is not limited to:~~

~~7.8.1.1 total load met;~~

~~7.8.1.2 transmission capacity between the *IESO-controlled grid* and each *intertie zone*;~~

~~7.8.1.3 subject to section 7.8.2, any *outages* of transmission *facilities*;~~

~~7.8.1.4 total *operating reserve* scheduled, and total *energy* called from such *operating reserve*, by area;~~

~~7.8.1.5 the market prices for each *dispatch interval*; and~~

~~7.8.1.6 the uniform *hourly Ontario energy price* (HOEP) determined in accordance with section 8.3.1.~~

~~7.8.2 Until the date that is the first day of the fourth calendar month following the *market commencement date,* calculated from the first day of the calendar month immediately following the month in which the *market commencement date* occurs, the *IESO* shall not *publish* information concerning *outages* of transmission *facilities* referred to in section 7.8.1.3.~~

8. Determining Market Prices and Economic Operating Points

8.1 Purpose and Timing of Determining Market Prices

8.1.1 The *IESO* shall use the procedures in this section 8 to determine the ~~uniform~~ *market prices* for *energy* and *operating reserve* in the *IESO control area* and the *intertie zone*~~s prices for *energy* and *operating reserve*~~ that are used for the market *settlement process* pursuant to the provisions of MR Ch.~~apter~~ 9.

~~8.1.1A The *IESO* shall determine the *intertie congestion price* associated with each *intertie zone* for each *dispatch hour* based on the *pre-dispatch schedule* referred to in section 6.1.3.~~

8.1.2 Subject to section 8.4A, the *IESO* shall determine ~~and *publish* *market prices*~~ for *energy* and *operating reserve* in accordance with sections 8.2 and 8.3~~ within five minutes after the end of each *dispatch interval*, as provided in section 6.4~~, and *publish* such *market prices* in accordance with sections 4, 5 and 6, respectively.

~~8.1.2.1 [Intentionally left blank]~~

~~8.1.2.2 [Intentionally left blank]~~

~~8.1.2.3 [Intentionally left blank]~~

~~8.1.2.4 [Intentionally left blank]~~

~~8.1.3 [Intentionally left blank]~~

8.2 ~~Ex post~~Market Prices for ~~Each Dispatch Interval~~the Day-Ahead Market and the Real-Time Market

8.2.1 The *IESO* shall determine *market prices* for *energy* and *operating reserve* (a) for ~~each *dispatch interval*;~~the *day-ahead market* using the ~~*dispatch algorithm* as follows:~~*day-ahead market calculation engine,* and (b) for the *real-time market,* using the *pre-dispatch calculation engine* and *real-time calculation engine*.

~~8.2.1.1 the data and information described in section 4.4 shall be used as inputs, using the most recent valid *dispatch data* submitted by *registered market participants* and the most accurate system data and *metering data* for that *dispatch interval* that is available at the time the *market prices* are being determined;~~

~~8.2.1.2 the unconstrained *IESO-controlled grid* model shall be used;~~

~~8.2.1.3 the operating status of each *registered facility*, in the *dispatch algorithm* at the start of each *dispatch interval* shall be set equal to the operating status in the *market schedule* determined for the end of the preceding *dispatch interval* for that *registered facility* and, subject to section 8.2.3, recognizing by the adjustment to the input data any *registered facility* in respect of which a *forced outage* has occurred or of which the *interchange schedule* has been curtailed due to constraints external to the *IESO control area* during that *dispatch interval*;~~

~~8.2.1.4 the *dispatch algorithm* shall be run to determine *the market schedules* that maximise the economic gains from trade under the assumptions made pursuant to this section 8.2.1; and~~

~~8.2.1.5 subject to section 8.2.2, the marginal costs from the *dispatch algorithm* for *energy* and each class of *operating reserve*, in the *IESO control area* and in each *intertie zone*, shall be the *market prices* for that *dispatch interval*.~~

8.2.2 The *market prices* ~~prices~~ produced in accordance with section 8.2.1~~as part of the output of the market scheduling and pricing process described in Appendix 7.5 for a pricing run shall not necessarily~~ may be the prices that are used for *settlement* purposes, subject to MR Ch.9 s.2.12.1. ~~Without limiting the generality of the foregoing, the following prices shall be used for *settlement* purposes:~~

8.2.2.1 the *energy* price for an *intertie zone* adjoining the *IESO control area* shall for *settlement* purposes, and subject to sections 8.2.2.4 to 8.2.2.7, equal the uniform Ontario *energy* price modified by the difference between the *intertie zone energy* price and the uniform Ontario *energy* price determined in the projected *market schedule*;

8.2.2.2 the *operating reserve* price for each class of *operating reserve* supplied from within the *IESO control area* shall for *settlement* purposes, and subject to sections 8.2.2.4 to 8.2.2.7, be formed:

a. from the shadow prices associated with the *operating reserve* requirements within the *IESO control area* during *dispatch intervals* when such requirements can be met; or

b. from the greater of the highest priced *offer* associated with the scheduled *operating reserve* or the *energy* prices for the *dispatch interval* during which the *operating reserve* requirements within the *IESO control area* cannot be met;

8.2.2.3 the *operating reserve* price for each class of *operating reserve* in an *intertie zone* adjoining the *IESO control area* shall for *settlement* purposes, and subject to section 8.2.2.4 to 8.2.2.7, equal the corresponding uniform *operating reserve* price for the *IESO control area* for that class of *operating reserve* modified by the difference between the corresponding *operating reserve* price for the *intertie zone* and the uniform *operating reserve* price for the *IESO control area* determined in the projected *market schedule*;

8.2.2.4 any *energy* price produced which exceeds *MMCP* shall be set equal to *MMCP* for *settlement* purposes;

8.2.2.5 any *energy* price produced which is less than negative *MMCP* shall be set equal to negative *MMCP* for *settlement* purposes;

8.2.2.6 any price for *operating reserve* produced which exceeds *MORP* shall be set equal to *MORP* for *settlement* purposes; and

8.2.2.7 any price for *operating reserve* produced which is negative will be set equal to zero for *settlement* purposes.

8.2.3 In the calculation of *market prices*, the *IESO* shall:

8.2.3.1 in the manner specified in section 8.2.1.3, adjust the input data at the start of a *dispatch interval* of a *registered facility* in respect of which a *forced outage* or *interchange schedule* curtailment due to constraints external to the *IESO control area* has occurred during the preceding or an earlier *dispatch interval*; and

~~8.2.3.2 make the adjustment referred to in section 8.2.1.3 in respect of such *registered facility* only to the extent that the input data can be adjusted having regard to the timing of the *forced outage* or *interchange schedule* curtailment due to constraints external to the *IESO control area* and the *IESO's* procedures for updating input data.~~

~~8.3 Uniform Ex-post Prices for Each Hour~~

~~8.3.1 The *IESO* shall determine, for each *dispatch hour*, a uniform *hourly Ontario energy price* (HOEP) in accordance with the formulation described as $HOEP_h$ in section 3.1.3 of Chapter 9.~~

8.3 Ex-Post Determination of Economic Operating Points

8.3.1 For the purposes of calculating *day-ahead market* and *real-time market* make-whole payment *settlement amounts* in accordance with MR Ch.9 ss.3.4 and 3.5, the *IESO* shall determine economic operating points within six calendar days of the applicable *dispatch day* in accordance with sections 8.3.2, 8.3.3 and 8.3.4.

8.3.2 For each *resource* eligible to receive a *day-ahead market* make-whole payment *settlement amount* in accordance with MR Ch.9 s.3.4.1, the *IESO* shall determine lost cost economic operating points for *energy* and *operating reserve* for each hour of the *day-ahead market* in accordance with Appendix 7.8.

8.3.3 For each *resource* eligible to receive a *real-time market* make-whole payment *settlement amount* in accordance with MR Ch.9 s.3.5.1, the *IESO* shall determine lost cost economic operating points and lost opportunity cost economic operating points for *energy* and *operating reserve* for each *dispatch interval* of the *real-time market* in accordance with Appendix 7.8.

8.3.4 If the *IESO* has established an *administrative price* in accordance with section 8.4A, the economic operating points determined in accordance with section 8.3.2 and 8.3.3 shall be calculated using the *administrative price,* as applicable.

8.4 [Intentionally left blank]

8.4A Administrative Pricing ~~and Corresponding Schedules – Revised~~

8.4A.1 This section 8.4A applies only in respect of the establishment of *administrative prices* for ~~the *real-time* *energy* *market*~~ and ~~the~~ *operating reserve* for the *day-ahead* *market*~~.~~ and *real-time market*.

8.4A.2 Subject to section 8.4A.3, ~~T~~the *IESO* shall establish *administrative prices* ~~and~~for the *real-time market* and the *day-ahead market*, where applicable, within four *business days* of the affected *dispatch day* ~~corresponding *market schedules*~~ when:

8.4A.2.1 the *real-time market* for *energy* ~~*market*~~ or ~~the~~ *operating reserve* ~~*market*~~ has been suspended in accordance with section 13;

8.4A.2.2 the *IESO* is unable to *publish* ~~an *energy market price* or *operating reserve*~~a *market price* for *energy* or *operating reserve* for the *real-time market* in accordance with section 8.1.2 due to a failure in or *planned outage* of the software, hardware or communications systems that supports the operation of the ~~*dispatch algorithm*~~*real-time calculation engine*;

8.4A.2.3 the *IESO* determines, pursuant to the ~~guidelines approved by the *IESO Board* relating to~~ price error materiality thresholds established by the *IESO*~~, and acceptable causal events,~~ that a *published* ~~*energy*~~ *market price* for *energy* or *operating reserve* for the *real-time market* ~~*price*~~ is incorrect due to circumstances provided for in section 8.4A.3B~~incorrect inputs which affected the outcome of the *dispatch algorithm*~~; or

8.4A.2.4 the *IESO* determines, pursuant to the price error materiality thresholds established by the *IESO*, that a *published market price* for *energy* or *operating reserve* for the *day-ahead market* is incorrect due to circumstances provided for in section 8.4A.3C and the error is isolated to *market price* calculations or *publishing*, and has not impacted *day-ahead schedules*;

and all such *administrative prices* shall be the *market prices* for *energy* ~~*market price*~~ and ~~the~~ *operating reserve* ~~*market price*~~ for the applicable *dispatch hour* in the *day-ahead market* or *dispatch interval* in the *real-time market* for all purposes under these *market rules*.

8.4A.3 The *IESO* is not required to establish *administrative prices* in the circumstances provided by sections 8.4A.2.3 or 8.4A.2.4 if the *IESO* is not aware of those circumstances before such time as is practicable for the *IESO* to establish *administrative prices* within four *business days* of the affected *dispatch day*.~~Where the *IESO* establishes *administrative prices* pursuant to section 8.4A.2 it shall do so within two *business days* of the event causing *market prices* to be administered.~~

8.4A.3A The *IESO* shall inform *market participants* as soon as practicable whenever a *published market price* is an *administrative price*.

8.4A.3B For the purposes of section 8.4A.2.3, a published *energy* or *operating reserve market price* will be subject to *administrative prices* if it is incorrect due to an input in the *real-time calculation engine* and relates to any of the following:

8.4A.3B.1 the formation of an *electrical island*

8.4A.3B.2 the loss or corruption of inputs to the *pre-dispatch calculation engine* or *real-time calculation engine* due to an:

(a) operational telemetering failure;

(b) *IESO-administered markets* software failure; or

(c) *IESO* business process failure.

8.4A.3C For the purposes of section 8.4A.2.4, a published *energy* or *operating reserve market price* will be subject to *administrative prices* if it is incorrect due to the loss or corruption of the *day-ahead market calculation engine* data due to an IESO business process failure.

Administration of Prices Due to Failures or Planned Outages of Market Systems, Publication of Incorrect Prices ~~or~~, Implementation of an Emergency Control Action

8.4A.4 In circumstances where *administrative prices* are required under sections 8.4A.2.2, 8.4A.2.3, or 8.4A.2.~~3~~4 the *IESO* shall use the best available *dispatch data* to establish *administrative prices* ~~and corresponding *market schedules*~~ that would, to the extent practical, reflect the *market prices* ~~and corresponding *market schedules*~~ that would have otherwise been produced by the *day-ahead market* or *real-time* ~~*markets,*~~ *market,* but for the event causing *market prices* to be administered.

8.4A.5 Where the *IESO* establishes *administrative prices* pursuant to sections 8.4A.2.2, ~~or~~ 8.4A.2.3 ~~in respect of one,~~ or ~~more *dispatch intervals,* it shall use the best available *dispatch data* for *energy* or *operating reserve,* as the case may be, pertaining to the *dispatch interval* to which the *administrative price* is to be applied and~~ 8.4A.2.4, the *market prices* ~~and corresponding~~for the applicable *dispatch hour* in the *day-ahead market* ~~*schedule* for that~~or *dispatch interval* in the *real-time market* shall be as the *IESO* determines appropriate consistent with the principle stated in section 8.4A.4, and shall be the *market* ~~*price* and corresponding *market schedule* from~~*prices* from one, or a combination of, the following *administrative pricing* methods:

8.4A.5.1 the recalculated *market prices* determined using software that replicates the applicable calculation engine;

8.4A.5.2 the hourly *market prices* determined by the *day-ahead market calculation engine* that correspond to the same hour and *dispatch day* that the *IESO* is administering *real-time market prices*;

8.4A.5.3 the *market prices* for an electrically similar *delivery point* or *intertie metering point* in the same *dispatch interval* where the *market price* has not been administered;

8.4A.5.4 the *market prices* from the closest preceding *dispatch interval* that has not been administered, up to a maximum of ~~24~~12 *dispatch intervals*;

8.4A.5.~~2~~5 the *market prices* from the closest subsequent *dispatch interval* that has not been administered, up to a maximum of ~~24~~12 *dispatch intervals*; or

8.4A.5.~~3~~6 using an hourly average *market price* for *energy* and *operating reserve* for the applicable *dispatch intervals* from the corresponding hour or hours of the four immediately preceding *business days* or non-*business days,* as the case may be, excluding those hours from any day in which

administrative pricing has been established under this section. Prices for the excluded hours shall be replaced by prices that have not been administered under this section from the corresponding hours of the most recent earlier *business days* or non-*business days*, as the case may be. For greater certainty, where the *IESO* is determining the *administrative price* for a *business day*, it shall use the immediately preceding *business days* and where the *IESO* is determining the *administrative price* for a non-*business day*, it shall use the immediately preceding non-*business days.* ~~a combination of the closest preceding and closest subsequent *dispatch intervals* that have not been administered, provided that neither the preceding nor subsequent *dispatch intervals* are selected for more than 24 *dispatch intervals* and are applied in a continuous manner such that the *administrative price* chosen from the preceding *dispatch interval* shall apply until changed to the *administrative price* selected from the subsequent *dispatch interval*.~~

~~8.4A.6 Where the *IESO* establishes an *administrative price* pursuant to sections 8.4A.2.2, or 8.4A.2.3 the *IESO* shall, if the need for *administrative prices* extends beyond 48 *dispatch intervals*, establish *administrative prices* for the remaining *dispatch intervals* of the event causing *market prices* to be administered within the *IESO control area* and the *intertie zones,* using an average *HOEP* for the *energy market* and the hourly average of the *operating reserve* prices for the applicable *dispatch intervals* for the *operating reserve markets*, determined from the corresponding hour or hours from each of the 4 most recent *business days* or non-*business days*, as the case may be, excluding those hours from any day in which *administrative pricing* has been established under this section. Prices for the excluded hours shall be replaced by prices that have not been administered under this section from the corresponding hours of the most recent earlier *business days* or non-*business days*, as the case may be.~~

~~8.4A.7 Where the *IESO* establishes an *administrative price* for a *dispatch interval* pursuant to section 8.4A.6, there shall be no congestion management *settlement* credit payments made under section 3.5.2 of Chapter 9 for that *dispatch interval*.~~

Administration of Prices Due to Market Suspension

8.4A.6~~8~~ Where the *IESO* establishes *administrative prices* during a market suspension pursuant to section 8.4A.2.1, it shall establish the *administrative price* as one of the following, as the *IESO* determines appropriate:

8.4A.6~~8~~.1 where *market operations* have been suspended for reasons other than a failure in the software that generates *market prices* and operations of the *IESO-controlled grid* are based to some extent on market-based information and signals, a *market price* calculated using that software; or

8.4A.6~~8~~.2 where operations of the *IESO-controlled grid* are being conducted without regard to the market, for the *IESO control area* and the *intertie zones,* using the *administrative pricing* method detailed in section 8.4A.5.6.~~an average *HOEP* for the *energy market* and the hourly average of the~~

~~*operating reserve* prices for the applicable *dispatch intervals* for the *operating reserve markets*, determined from the corresponding hour or hours from each of the 4 most recent *business days* or non-*business days*, as the case may be, excluding those hours from any day in which *administrative pricing* has been established under this section, and there shall be no congestion management *settlement* credit payments made under section 3.5.2 of Chapter 9 for the period of *market suspension*. Prices for the excluded hours shall be replaced by prices that have not been administered under this section from the corresponding hours of the most recent earlier *business days* or non-*business days*, as the case may be.~~

Make-Whole Payments and Administrative Prices

8.4A.7 Where the *IESO* has established an *administrative price* pursuant to section 8.4A.2, the *IESO* shall determine any applicable *day-ahead market* and *real-time market* make-whole payment *settlement amounts* in accordance with MR Ch.9 ss.3.4 and 3.5 using the *administrative price*. ~~Where the *IESO* establishes an *administrative price* for a *dispatch interval* pursuant to section 8.4A.6, there shall be no congestion management *settlement* credit payments made under section 3.5.2 of Chapter 9 for that *dispatch interval*.~~

Conditions to Cease the Administration of Prices

8.4A.8~~17~~ The *IESO* shall cease to apply *administrative prices*:

8.4A.8~~17~~.1 where section 8.4A.2.1 applies, from the commencement of the first *dispatch interval* in the *dispatch hour* referred to in section 13.7.1.2;

8.4A.8~~17~~.2 where section 8.4A.2.2 applies due to a failure in software, hardware or communications systems, from the commencement of the first *dispatch interval* after the failure referred to in that section has been rectified;

8.4A.8~~17~~.3 where section 8.4A.2.2 applies due to a *planned outage* of software, hardware or communications systems, from the commencement of the first *dispatch interval* after the *planned outage* referred to in that section has been completed; and

8.4A.8~~17~~.4 where section 8.4A.2.3 or 8.4A.2.4 applies, from the commencement of the first *dispatch interval* after the cause of the incorrect ~~inputs~~*market prices* referred to in ~~that section~~ those sections have been corrected.

~~Additional Compensation for Complying with Dispatch Instructions~~

~~8.4A.9 Where the *IESO* has established an *administrative price* pursuant to sections 8.4A.6 and 8.4A.8.2 and subject to any materiality limits published in the applicable *market manual*,~~

8.4A.9.1 a *market participant* with a *generation facility* that has complied with *dispatch instructions* issued by the *IESO* shall be entitled to additional compensation determined under section 8.4A.10;

8.4A.9.2 a *market participant* with a *dispatchable load facility* shall be entitled to additional compensation on those consumption amounts where their *bid* price is less than the *administrative price,* equal to the difference between its applicable *bid* price and the *administrative price* multiplied by those consumption amounts if:

- the *market participant's bid* price, for the level of consumption to which it was dispatched, is less than the *administrative price;*
- the *market participant* has complied with *dispatch instructions* issued by the *IESO*; and
- the *market participant* issues to the *IESO* a *notice of disagreement* in accordance with section 6.8 of Chapter 9;

8.4A.9.3 a *market participant* with an *electricity storage facility* that injected *energy* into the *electricity system* shall be entitled to additional compensation on those injection amounts where its *offer* price is greater than the *administrative price*, equal to the difference between its applicable *offer* price and the *administrative price* multiplied by those injection amounts if;

- the *market participant's offer* price, for the level of injection to which it was dispatched, is greater than the *administrative price;*
- for the *dispatch hour,* where both *energy offers* and *bids* are submitted for the same *electricity storage facility*, these *energy offers* and *bids* were submitted in accordance with section 21.4.2 of this Chapter;
- the market participant has complied with the dispatch instruction for the dispatch interval to which the administrative price applies; and
- the *market participant* issues to the *IESO* a *notice of disagreement* in accordance with section 6.8 of Chapter 9; and

8.4A.9.4 a *market participant* with an *electricity storage facility* that withdrew *energy* from the *electricity system* shall be entitled to additional compensation on those withdrawal amounts where its *bid* price is less than the *administrative price*, equal to the difference between its applicable *bid* price and the *administrative price* multiplied by those consumption amounts if:

- the *market participant's bid* price, for the level of withdraws to which it was dispatched, is less than the *administrative price;*

- for the *dispatch hour,* where both *energy offers* and *bids* are submitted for the same *electricity storage facility*, these *energy offers* and *bids* were submitted in accordance with section 21.4.2 of this Chapter;

- the market participant has complied with the dispatch instruction for the dispatch interval to which the administrative price applies; and

- the *market participant* issues to the *IESO* a *notice of disagreement* in accordance with section 6.8 of Chapter 9;

and the *IESO* shall recover any such compensation amounts in accordance with section 4.8 of Chapter 9.

8.4A.9A If the *energy market* is suspended and no *bid* prices are available to make the determination in section 8.4A.9.2 that a *bid* price is less than the *administrative price*, a *market participant* with a *dispatchable load facility* shall provide to the *IESO* evidence that its average historical *bid* price is less than the *administrative price*. Average historical *bid* prices shall be determined for each interval from the corresponding interval from each of the four most recent *business days* or non-*business days*, as the case may be, prior to the event that gave rise to the *administrative price*.

8.4A.9B If the *energy market* is suspended and no *offer* prices are available to make the determination in section 8.4A.9.3 that an *offer* price is greater than the *administrative price*, a *market participant* with an *electricity storage facility* shall provide to the *IESO* evidence that its average historical *offer* price is greater than the *administrative price*. Average historical *offer* prices shall be determined for each interval from the corresponding interval from each of the four most recent *business days* or non-*business days*, as the case may be, prior to the event that gave rise to the *administrative price*.

8.4A.9C If the *energy market* is suspended and no *bid* prices are available to make the determination in section 8.4A.9.4 that a *bid* price is less than the *administrative price*, a *market participant* with an *electricity storage facility* shall provide to the *IESO* evidence that its average historical *bid* price is less than the *administrative price*. Average historical *bid* prices shall be determined for each interval from the corresponding interval from each of the four most recent *business days* or non-*business days*, as the case may be, prior to the event that gave rise to the *administrative price*.

Dispatchable Generator, Electricity Storage Facility while Injecting, and Import:

Compensation = (-1) * OP(EMPh-m,t*, AQEI-k,h-m,t* , BE)

Where:

t* = *metering interval* of administrative price period

$EMP_{h}^{m,t*}$ is the administrative price in the metering interval t* of settlement hour h

OP is the profit function as described in Chapter 9, Section 3.5.2

Dispatchable Load, Electricity Storage Facility while Withdrawing and Export:

Compensation = $OP(EMP_{h}^{m,t*}, AQEW_{k,h}^{m,t*}, BL)$

Where:

t* = *metering interval* of administrative price period

$EMP_{h}^{m,t*}$ is the administrative price in the metering interval t* of settlement hour h

OP is the profit function as described in Chapter 9, Section 3.5.2

8.4A.10 The compensation referred to in section 8.4A.9.1 shall be calculated as the aggregate of:

8.4A.10.1 the fuel costs or, where applicable, the other costs referred to in section 8.4A.11, and the variable operating and maintenance costs incurred by the *market participant* in complying with the *dispatch instructions* issued by the *IESO,* which fuel costs or other costs and variable operating and maintenance costs shall be subject to verification and audit by the *IESO*; and

8.4A.10.2 subject to section 8.4A.11, an amount equal to 10% of the amount determined pursuant to section 8.4A.10.1,

less the amount of the *administrative price* already paid or payable to the *market participant* under sections 8.4A.6 and 8.4A.8.2.

8.4A.11 Where the compensation referred to in sections 8.4A.9.1 relates to a *generation facility* that is energy limited by design or by bona fide contractual commitments, the *IESO* may accept, in lieu of the costs referred to in section 8.4A.10.1, such assessment of the expected future value or the opportunity costs of the fuel or water consumed:

8.4A.11.1 during the period while *administrative prices* were in effect; and

8.4A.11.2 in order to comply with the *dispatch instruction* issued by the *IESO*;

as the *IESO* considers reasonable. Where such value or costs are submitted in lieu of the costs referred to in section 8.4A.10.1, no amount shall be payable pursuant to section 8.4A.10.2 if, in the *IESO's* opinion, such value or costs include or adequately cover such amount.

Settlement Amount Adjustments Resulting from Administration of Prices Due to Failures or Planned Outages of Market Systems or Due to Publication of Incorrect Prices

8.4A.13 Where the *IESO* has established an *administrative price* pursuant to section 8.4A.5, a *market participant* may, subject to any materiality limits published in the applicable *market manual*, be eligible for an adjustment to its *settlement amounts* if:

8.4A.13.1 that *market participant* has been assessed a negative hourly congestion management *settlement* credit pursuant to section 3.5 of Chapter 9 for any of the applicable *dispatch intervals*;

8.4A.13.2 no *intertie* offer guarantee that would offset that negative hourly congestion management *settlement* credit has been assessed for that *market participant* pursuant to section 3.8A of Chapter 9;

8.4A.13.3 the *market schedule* determined pursuant to section 8.4A.5 is carried forward or backward to another *dispatch hour* that is the *dispatch hour* to which the negative congestion management *settlement* credit referred to in section 8.4A.13.1 applies;

8.4A.13.4 the price and/or quantity values in the *dispatch data* submitted by the *market participant* are different in the *dispatch hour* from which the *market schedule* referred to in section 8.4A.13.3 was established compared to the *dispatch data* submitted by the *market participant* for the *dispatch hour* to which the negative congestion management *settlement* credit referred to in section 8.4A.13.1 applies;

8.4A.13.5 the *market participant* complied with the *dispatch instructions* issued by the *IESO* for the applicable *dispatch intervals*;

8.4A.13.6 the negative hourly congestion management *settlement* credit referred to in section 8.4A.13.1 arose strictly due to the circumstances outlined in section 8.4A.13.3 through 8.4A.13.5; and

8.4A.13.7 the *market participant* issues to the *IESO* a *notice of disagreement* in accordance with section 6.8 of Chapter 9 providing evidence that the circumstances outlined in section 8.4A.13.1 through 8.4A.13.6 have occurred.

8.4A.14 If the *market participant*, pursuant to section 8.4A.13, has demonstrated to the satisfaction of the *IESO* that circumstances outlined in section 8.4A.13.1 through 8.4A.13.6 have occurred, the *IESO* shall, in accordance with section 6.6 of Chapter 9, adjust the *market participant's settlement amounts* by an amount to offset the

negative hourly congestion management *settlement* credit referred to in section 8.4A.13.1.

8.4A.15 Where the *IESO* has established an *administrative price* pursuant to section 8.4A.5, a *market participant* may, subject to any materiality limits published in the applicable *market manual*, be eligible for additional compensation if:

8.4A.15.1 the *market participant* has been assessed an hourly net *energy market settlement* credit for a *dispatchable facility* or *boundary entity* that represents either an underpayment or overcharge, as the case may be, when comparing the *administrative price* used for determining the hourly net *energy market settlement* credit to the *market participant's* applicable *offer* or *bid* price;

8.4A.15.2 no *intertie* offer guarantee that would offset that underpayment has been assessed for that *market participant* pursuant to section 3.8A of Chapter 9;

8.4A.15.3 no hourly congestion management *settlement* credit that would offset that overcharge or underpayment has been assessed for that *market participant* pursuant to section 3.5 of chapter 9;

8.4A.15.4 the *market schedule* determined pursuant to section 8.4A.5 is carried forward or backward to another *dispatch hour* that is the *dispatch hour* to which the hourly net *energy market settlement* credit referred to in section 8.4A.15.1 applies;

8.4A.15.5 the price and/or quantity values in the *dispatch data* submitted by the *market participant* are different in the *dispatch hour* from which the *market schedule* referred to in section 8.4A.15.4 was established compared to the *dispatch data* submitted by the *market participant* for the *dispatch hour* to which the above hourly net *energy market settlement* credit applies referred to in section 8.4A.15.1;

8.4A.15.6 the *market participant* complied with the *dispatch instructions* issued by the *IESO* for the applicable *dispatch intervals*;

8.4A.15.7 the hourly net *energy market settlement* credit referred to in section 8.4A.15.1 and the resulting overcharge or underpayment arose strictly due to the circumstances outlined in section 8.4A.15.4 through 8.4A.15.6; and

8.4A.15.8 the *market participant* issues to the *IESO* a *notice of disagreement* in accordance with section 6.8 of Chapter 9 providing evidence that the circumstances outlined in section 8.4A.15.1 through 8.4A.15.7 have occurred.

8.4A.16 If the *market participant*, pursuant to section 8.4A.15 has demonstrated to the satisfaction of the *IESO* that circumstances outlined in section 8.4A.15.1 through

8.4A.15.7 have occurred, the *IESO* shall, in accordance with section 6.8 of Chapter 9, adjust the *market participant's settlement amounts* by the following amount to offset the overcharge or underpayment, referred to in section 8.4A.15.1, as the case may be.

Dispatchable Generator and Import:

$$\text{Compensation} = (-1) * OP(EMP_{h}^{m,t^*}, AQEI_{k,h}^{m,t^*}, BE)$$

Where:

t* = *metering interval* of administrative price period

EMP_{h}^{m,t^*} is the administrative price in the metering interval t* of settlement hour h

OP is the profit function as described in Chapter 9, Section 3.5.2

Dispatchable Load and Export:

$$\text{Compensation} = OP(EMP_{h}^{m,t^*}, AQEW_{k,h}^{m,t^*}, BL)$$

Where:

t* = *metering interval* of administrative price period

EMP_{h}^{m,t^*} is the administrative price in the metering interval t* of settlement hour h

OP is the profit function as described in Chapter 9, Section 3.5.2

9. IESO Procurement Markets

9.1 Introduction

9.1.1 The *IESO* shall procure, primarily through contracts, certain *physical services* that are needed to maintain *reliable* system operations but that are not *offered* in the day-ahead market or *real-time* ~~markets~~*market*. The *IESO* may also enter into contracts allowing it to direct the operations of specific *generation facilities, electricity storage facilities* or *load facilities* that are critical to system *reliability* under certain conditions. This section 9 describes such *physical services* and the manner in which the *IESO* shall procure them.

9.2 Definition of Contracted Ancillary Services

9.2.1 Subject to sections 9.4 and 9.5.2, the *IESO* shall procure *contracted ancillary services* through contracts between the *IESO* and *ancillary service providers* that are *registered market participants* who have demonstrated the ability to provide such *contracted ancillary services* from ~~*registered*~~ *facilities* or *resources* in accordance with the performance standards and other applicable requirements of MR Ch.5 s.4~~section 4 of Chapter 5~~. *Contracted ancillary services* shall meet all applicable standards set forth in MR Ch.5 s.4~~section 4 of Chapter 5~~ and shall be procured such as to enable the *IESO* to meet its obligations thereunder.

9.2.2 The principal *contracted ancillary services* that the *IESO* will procure pursuant to section 9.2.1 are:

9.2.2.1 *regulation*: this *ancillary service* allows total system generation to match total system load (plus losses) minute-by-minute or even second-by-second as required on an electricity grid;

9.2.2.2 *voltage control* and *reactive support*: this *ancillary service* involves the control and maintenance of prescribed voltages at specific locations, using defined reactive capacity, *energy* and manoeuvrability to support system operations. *Reactive support* is provided by *generation units*, *electricity storage units* as well as by synchronous condensers, capacitors and other electrostatic equipment that is often owned and operated by *transmitters*; and

9.2.2.3 *black start capability*: this *ancillary service* involves *generation facilities* that are tested and/or assessed for their ability to be a *certified black start facility*, and from which the *IESO* may direct the delivery of power without assistance from the electrical system.

9.2.2.4 [Intentionally left blank – section deleted]

9.2.3 The *IESO* shall procure each *contracted ancillary service*:

9.2.3.1 in sufficient quantities and at the appropriate locations to enable the *IESO* to meet its obligations under MR Ch.5~~Chapter 5~~ to ensure *reliable* operation of the *electricity system*, in accordance with all applicable *reliability standards*; and

9.2.3.2 using, to the extent practicable, competitive processes appropriate to the specific technical and market characteristics of each *contracted ancillary service*, to acquire each *contracted ancillary service* at competitively determined prices.

9.3 Contracted Ancillary Service Contracts

9.3.1 The *IESO* shall enter into *contracted ancillary service* contracts with *ancillary service providers*. Such agreements shall, subject to sections 9.3.4 and 9.3.6:

9.3.1.1 [Intentionally left blank – section deleted]

9.3.1.2 compensate any *ancillary service provider* for levels of service above those required to be provided by the *connection* requirements of MR Ch.4~~Chapter 4~~.

9.3.2 Subject to section 9.3.6, the *IESO* shall use one or a combination of the following processes to conclude *contracted ancillary service* contracts with *ancillary service providers*:

9.3.2.1 where practical, the *IESO* shall employ a competitive tendering or negotiation process to identify multiple potential *ancillary service providers* and to determine competitive prices and other terms for the *contracted ancillary service* contracts; or

9.3.2.2 the *IESO* may negotiate *contracted ancillary service* contracts with a single potential *ancillary service provider* where the *IESO* determines that this will result in reasonable prices and other terms.

9.3.3 [Intentionally left blank]

~~9.3.3.1 [Intentionally left blank]~~

~~9.3.3.2 [Intentionally left blank]~~

~~9.3.3.3 [Intentionally left blank]~~

9.3.4 The provisions of sections 9.3.1 and 9.5.1 shall be subject to any contrary provisions contained in:

9.3.4.1 any *licence*; or

9.3.4.2 the terms of any *contracted ancillary service* contract the terms of which are required by a *licence* to be, and have been, approved by the *Ontario Energy Board*.

9.3.5 Each person that:

9.3.5.1 has entered into a *contracted ancillary service* contract with the *IESO*; and

9.3.5.2 is not, at any time during the term of such *contracted ancillary service* contract, the *registered market participant* for that *facility*~~,~~ or *resource*,

shall ensure that the *registered market participant* for that *facility* or *resource* complies with the provisions of the *contracted ancillary service* contract.

9.3.6 Where the *IESO* and the *ancillary service provider* are unable to reach agreement upon the terms and condition of a proposed *ancillary service* contract, or an

amendment to an *ancillary service* contract, the matter shall be determined by the *Ontario Energy Board*.

9.4 The Effect of Grid Connection Requirements

9.4.1 The *IESO* may at any time direct a ~~*registered facility*~~ *facility* or *resource* to provide the level of any *ancillary service* that the ~~*registered*~~ *facility* or *resource* is required to provide as a condition of any *licence* or as a result of any *connection* requirements provided for in Ch~~apter~~ 4.

9.4.2 Subject to section 9.4.4, a ~~*registered*~~ *facility* or *resource* shall not be entitled to compensation from the *IESO* for any *ancillary service* that must be provided pursuant to the *connection* requirements provided for in Ch~~apter~~ 4 unless and until the *IESO* develops a market for such *ancillary service* that pays all providers of the *ancillary service* and/or that requires any ~~*registered*~~ *facility* or *resource* to pay for the failure to supply up to some standard that may be less than that attributable to the *connection* requirement.

9.4.3 If the *IESO* directs a ~~*registered*~~ *facility* or *resource* to provide a level of any *ancillary service* above the levels required by the *licence* applicable to that ~~*registered*~~ *facility* or *resource* or any connection requirements provided for in Ch~~apter~~ 4 and the ~~*registered*~~ *facility* or *resource* is not otherwise subject to a *contracted ancillary service* contract with the *IESO*, the *IESO* shall compensate the ~~*registered*~~ *facility* or *resource* for any costs, including lost opportunity costs, incurred by the ~~*registered facility*~~ or *resource* in complying with the *IESO*'s direction.

9.4.4 If the *IESO* directs a ~~*registered*~~ *facility* associated with a *generation unit* or an *electricity storage unit* to provide *reactive support* within the range required by the *connection* requirements provided for in Ch~~apter~~ 4, the *IESO* shall only be required to compensate the ~~*registered facility*~~associated *market participant* for a *generation unit* or *electricity storage unit* to the extent that the ~~*registered facility*~~*generation unit* or *electricity storage unit* incurs additional costs, provided that such additional costs are demonstrated to the satisfaction of the *IESO* to have been incurred in order to comply with the *IESO's* direction.

9.4.5 If the *IESO* directs a ~~*registered facility*~~ *facility* associated with a *generation unit* or an *electricity storage unit* to provide *reactive support* within the range required by the *connection* requirements provided for in Ch~~apter~~ 4 or as stipulated in the applicable *contracted ancillary service* contract, and that ~~*registered facility*~~*generation unit* or *electricity storage unit* has to reduce its active power output in order to comply with the *IESO*'s direction, ~~that *registered facility*~~the associated *market participant* for a *generation unit* or *electricity storage unit* shall not be entitled to a ~~congestion management *settlement* credit~~ *day-ahead market* or *real-time market* make-whole payment *settlement amount,* as applicable, for that reduction in active power output.

9.5 Payment for Ancillary Services and Recovery of Costs

9.5.1 Subject to sections 9.3.4 and 9.3.6, the price payable by the *IESO* under a *contracted ancillary service* contract may cover any of the following:

9.5.1.1 the cost of being available to provide a *contracted ancillary service* if instructed by the *IESO* to do so;

9.5.1.2 the out-of-pocket costs and the opportunity costs of actually providing the *contracted ancillary service* when instructed by the *IESO* to do so; and

9.5.1.3 such other compensation as the *IESO* determines to be fair and reasonable under the circumstances.

9.5.2 The *IESO* is ~~authorised~~authorized, when necessary to maintain system *reliability* or when the *IESO-controlled grid* is in an *emergency operating state* to direct a ~~*registered* facility~~ *facility* or *resource* to provide any class of *contracted ancillary services* even though the *IESO* does not have a *contracted ancillary service* contract with that ~~*registered* facility~~ *facility* or *resource*. When this occurs:

9.5.2.1 the *IESO* shall compensate the ~~*registered*~~associated *market participant* for a *facility* or *resource* for any costs, including opportunity costs, it incurs in complying with the *IESO's* direction; and

9.5.2.2 any dispute about the compensation payable pursuant to section 9.5.2.1 shall be resolved using the dispute resolution process set forth in MR Ch.3 s.2~~section 2 of Chapter 3~~.

9.5.3 The *IESO* shall, in accordance with MR Ch.9 s.4.2 ~~section 4.2 of Chapter 9~~, recover from *market participants* any costs it incurs in procuring *ancillary services*.

9.6 Definition and Principles of Must-Run Contracts

9.6.1 The *IESO* may, under the conditions and in accordance with the processes specified in this section 9.6, enter into a *reliability must-run contract* with the *registered market participant* or the prospective *registered market participant* for a *reliability must-run resource.* Where the *IESO* and a *registered market participant* or prospective *registered market participant* enter into a *reliability must-run contract* with respect to a given *reliability must-run resource*, the *IESO* may direct that *reliability must-run resource* to operate in specific ways ~~when instructed by the *IESO* to do so~~ for reasons of *reliability*, other than for reasons of a lack of overall *adequacy* of the *IESO-controlled grid*, regardless of whether *dispatch data* has been submitted with respect to that *reliability must-run resource*. Nothing in this section shall be construed as preventing the *IESO* from taking such other action in respect of such *reliability must-run resource* as may be permitted by these *market rules* to address a concern for overall *adequacy.*

9.6.2 Subject to section 9.6.4, the *IESO* may enter into a *reliability must-run contract* based on studies performed by the *IESO* that indicate:

9.6.2.1 in accordance with section 9.6.3, that a *reliability must-run resource* is required to be available for the purposes of *reliability*, other than in situations of overall *adequacy* of the *IESO-controlled grid*; or

9.6.2.2 a *reliability must-run resource* is likely to be *dispatched* ~~as a *constrained on facility* or a *constrained off facility*~~to supply more or less *energy* than otherwise required to assist in addressing a transmission flow constraint on the *IESO controlled-grid* or a *security limit* and that such a contract would avail to the mutual benefit of the parties.

9.6.3 The studies referred to in section 9.6.2.1 shall include a consideration of whether concerns regarding *reliability*, other than regarding a lack of overall *adequacy* of the *IESO-controlled grid*, can be addressed by means of the process for directing the submission of *dispatch data* or for imposing a restriction on the revision of *dispatch data* referred to in sections 3.3.10 to 3.3.17 or of the process by which the *IESO* approves *outages* pursuant to MR Ch.5 s.6~~section 6 of Chapter 5~~.

9.6.4 The *IESO* shall enter into a *reliability must-run contract* pursuant to section 9.6.2.2 in respect of a *reliability must-run resource* only where the *registered market participant* or the prospective *registered market participant* for the *reliability must-run resource* so agrees.

9.6.5 Where:

9.6.5.1 the *IESO* would be required to reject, revoke *advance approval* of, or recall the *planned outage* of a ~~*registered facility*~~*resource* pursuant to MR Ch.5 s.6~~section 6 of Chapter 5~~ but for the availability of a *reliability must-run resource*; and

9.6.5.2 the *reliability must-run resource* referred to in section 9.6.5.1 has planned a temporary reduction in staff that would restrict or prevent operation of that other ~~*registered facility*~~*resource*,

the *IESO* may enter into a *reliability must-run contract* in respect of the *reliability must-run resource* referred to in section 9.6.5.1 provided that:

9.6.5.3 staffing adequate to permit that *reliability must-run resource* to operate under the *reliability must-run contract* can be arranged by that *reliability must-run resource* within the time required; and

9.6.5.4 the conclusion of the *reliability must-run contract* referred to in section 9.6.5.3 would avoid the need for the *IESO* to reject, revoke *advance approval* of, or recall the *planned outage* referred to in section 9.6.5.1.

9.6.6 The *IESO* may call upon a *reliability must-run resource* that is subject to a *reliability must-run contract* if and only if the *IESO* determines that *market participants* will not *offer* sufficient *physical services* into the *real-time markets* to enable the *IESO* to maintain *reliability*, other than in respect of a lack of overall *adequacy* of the *IESO-controlled grid*.

9.6.7 Subject to section 9.6.13, the *IESO* shall use one or a combination of the following processes to conclude *reliability must-run contracts* pursuant to section 9.6.2:

9.6.7.1 where practical, the *IESO* shall employ a competitive tendering or negotiation process to identify multiple potential suppliers and to determine competitive prices and other terms for the *reliability must-run contract*; or

9.6.7.2 the *IESO* may negotiate *reliability must-run contracts* with a single potential supplier where the *IESO* determines that this will result in reasonable prices and other terms.

9.6.8 Subject to sections 9.6.11 and 9.6.13:

9.6.8.1 the *IESO* may develop standard forms of *reliability must-run contracts* for use in conjunction with sections 9.6 and 9.7,

provided that

9.6.8.2 a standard form *reliability must-run contract* developed for use in conjunction with a *reliability must-run resource* that has planned a temporary reduction in staff that would restrict or prevent its operation, including but not limited to the circumstances described in section 9.6.5, shall provide compensation only for the out-of-pocket costs including, but not limited to, the costs of providing adequate staffing, incurred solely to permit the *reliability must-run resource* to be prepared to provide *physical services* if *dispatched* to do so, but no such compensation shall be payable in respect of *dispatch intervals* when the *reliability must-run resource* is *dispatched* to provide such *physical services* and is entitled to payment therefore as a result of such *dispatch*.

9.6.9 Subject to sections 9.6.11 and 9.6.13, the *IESO* may include in any *reliability must-run contract,* other than a standard form *reliability must-run contract* referred to in section 9.6.8.2, the compensation provisions referred to in section 9.6.8.2 or such other compensation provisions as the *IESO* determines appropriate.

9.6.10 [Intentionally left blank]

~~9.6.10.1 [Intentionally left blank]~~

~~9.6.10.2 [Intentionally left blank]~~

~~9.6.10.3 [Intentionally left blank]~~

9.6.11 The provisions of sections 9.6.8, 9.6.9 and 9.7.1 shall be subject to any contrary provisions contained in:

9.6.11.1 any *licence*; or

9.6.11.2 the terms of any *reliability must-run contract* the terms of which are required by a *licence* to be, and have been, approved by the *Ontario Energy Board*.

9.6.12 [Intentionally left blank]

~~9.6.12.1 [Intentionally left blank]~~

~~9.6.12.2 [Intentionally left blank]~~

9.6.13 Where the *IESO* and the *registered market participant* or prospective *registered market participant* are unable to reach agreement upon the terms and condition of a *proposed reliability must-run contract*, or an amendment to a *reliability must-run contract*, the matter shall be determined by the *Ontario Energy Board*.

9.7 Terms and Conditions of Must-Run Contracts

9.7.1 Subject to sections 9.6.11 and 9.6.13, the *IESO* shall include in each *reliability must-run contract* terms and conditions that address, at a minimum, the following:

9.7.1.1 the duration of the *reliability must-run contract*, which shall not exceed 1 year;

9.7.1.2 the situations in which the *reliability must-run resources* may be called;

9.7.1.3 the situations under which some or all of the terms of the *reliability must-run contract* may be suspended;

9.7.1.4 the nature and timing of any advance notice required for the *IESO* to call upon the *reliability must-run resources*;

9.7.1.5 payment terms, including the amount and timing of any availability payment;

9.7.1.6 agreed *dispatch data* that the *IESO* shall use to *dispatch* the *reliability must-run resource* when it is called by the *IESO* to operate in various modes under the *reliability must-run contract*, and provisions for the revision of such *dispatch data*, when necessary;

9.7.1.7 the process for amending the terms of the *reliability must-run contract*; and

9.7.1.8 any penalties payable by either party for failure to satisfy its obligations under the *reliability must-run contract*.

9.7.2 The *IESO* shall, in accordance with MR Ch.9 s.4.2 ~~section 4.2 of Chapter 9~~, recover through charges on *market participants* the incremental costs of its *reliability must-run contracts* above any normal payments for *energy* and *operating reserves* recovered in the *real-time market~~s~~.*

9.8 Publication of Procurement Contract Information

9.8.1 The *IESO* shall treat information relating to the procurement of *contracted ancillary services* and *reliability must-run contracts* as follows:

9.8.1.1 the *IESO* shall *publish* annually the total costs of all contracted *ancillary services* subject to contracted *ancillary service* contracts and of all *reliability must-run contracts*;

9.8.1.2 the *IESO* shall *publish* annually the quantities of each *contracted ancillary service* covered under *contracted ancillary service* contracts and the quantities of each *physical service* provided under *reliability must-run contracts*, together with estimates of any additional quantities the *IESO* expects to acquire during the next 12 months;

9.8.1.3 where the *IESO* obtains *contracted ancillary services* or *reliability must-run contracts* in the absence of market power, the commercial terms of the *contracted ancillary service* contracts and of the *reliability must-run contracts* shall be treated as *confidential information*; and

9.8.1.4 where the *IESO* obtains *contracted ancillary services* or *reliability must-run contracts* in the presence of market power, as confirmed by the *market surveillance panel*, the *IESO* shall *publish* the relevant terms and conditions of the contracts, except for price which shall not be disclosed, in order to encourage competition.

9.9 Dispute Resolution

9.9.1 Subject to the *licence* of the *IESO* and of the relevant *market participant*, all disputes arising pursuant to a *contracted ancillary services* contract or a *reliability must-run contract* shall be resolved using the dispute resolution process set forth in MR Ch.3 s.2~~section 2 of Chapter 3~~.

Note – Section 10 was previously – Intentionally Left Blank.

10. Instructions for Generator Offer Guarantee Eligible Resources

10.1 Start-Up Notice

10.1.1 Subject to section 10.1.7, the *IESO* shall issue a *start-up notice* for (a) a *day-ahead operational commitment* other than those issued under section 10.1.2, or (b) *pre-dispatch operational commitment*, no later than 30 minutes after the hour corresponding to the applicable *pre-dispatch calculation engine* run that is immediately prior to the *resource's* start up procedures as required by its *lead time*.

10.1.2 Subject to section 10.1.7, the *IESO* shall issue a *start-up notice* prior to the first run of the *pre-dispatch calculation engine* for the relevant *dispatch day* if the *lead time* of a *day-ahead operational commitment* requires a *generation resource* to start-up in advance of the *pre-dispatch process.*

10.1.3 The *IESO* may issue a *start-up notice* for a *reliability* commitment at any time, if the *IESO* determines that it is necessary to maintain system *reliability.*

10.1.4 A *registered market participant* for a *GOG-eligible resource* shall acknowledge receipt of a *start-up notice* and shall indicate whether it reasonably expects the *resource* to operate in accordance with the *start-up notice:*

10.1.4.1 if the *start-up notice* has been issued in accordance with section 10.1.1, no later than 15 minutes prior to the start of the next *dispatch hour*; or

10.1.4.2 in circumstances other than those described in section 10.1.4.1, as soon as reasonably practicable after the receipt of such *start-up notice*.

10.1.5 If a *registered market participant* for a *GOG-eligible resource* indicates that it reasonably expects to operate in accordance with a *start-up notice* in accordance with section 10.1.4, the *registered market participant* shall immediately notify the *IESO* as soon as possible if it expects its *resource* to operate in a manner that, for any reason, differs materially from the *start-up notice*.

10.1.6 Subject to section 10.1.7, the *IESO* shall use reasonable efforts to ensure that a *start-up notice* issued:

10.1.6.1 in accordance with section 10.1.1(a), is consistent with the *resource's* most recent *pre-dispatch schedule;*

10.1.6.2 in accordance with section 10.1.1(b), is consistent with the *resource's* most recent *binding pre-dispatch advisory schedule;* or

10.1.6.3 in accordance with section 10.1.2, is consistent with the *resource's day-ahead schedule*.

10.1.7 The *IESO* shall not be required to issue a *start-up notice,* or, in the event that the *IESO* does issue a *start-up notice*, shall not be required to satisfy the requirements of section 10.1.6 if:

10.1.7.1 the *security* and *adequacy* of the system would be endangered by implementing the *day-ahead schedule, pre-dispatch schedule* or *binding pre-dispatch advisory schedule*;

10.1.7.2 the *day-ahead market calculation engine* or *pre-dispatch calculation engine* has failed, or has produced a *day-ahead schedule, pre-dispatch schedule or binding pre-dispatch advisory schedule* that is clearly and materially in error;

10.1.7.3 material changes have occurred subsequent to the *IESO's* determination of the *day-ahead schedule, pre-dispatch schedule* or *binding pre-dispatch advisory schedule*, including a failure of an element of a *transmission system* or failure of a *resource* to follow *dispatch instructions*; or

10.1.7.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13.

10.1.8 Notwithstanding sections 10.1.1 and 10.1.4.1, if there is a failure of *IESO* software, hardware or communication systems during the *pre-dispatch process*:

10.1.8.1 the *IESO* shall issue *start-up notices* as soon as reasonably practicable after the hour corresponding to the applicable *pre-dispatch calculation engine* run that is immediately prior to the *resource's* start-up procedures as required by its *lead time*; and

10.1.8.2 the *registered market participant* shall, as soon as reasonably practicable, acknowledge receipt of such *start-up notice* and shall indicate whether it reasonably expects the *resource* to operate in accordance with the *start-up notice*.

10.2 Notice of Decommitment

10.2.1 Subject to section 10.2.6, the *IESO* shall issue a notice of decommitment to a *GOG-eligible resource* no later than 30 minutes after the hour corresponding to the applicable *pre-dispatch calculation engine* run that has not scheduled the *resource* above its *minimum loading point* for the next *dispatch hour.*

10.2.2 The *IESO* may issue a notice of decommitment to a *GOG-eligible resource* at any time, if the *IESO* determines that it is necessary to maintain system *reliability.*

10.2.3 Subject to section 10.2.6, a *registered market participant* for a *GOG-eligible resource* shall acknowledge receipt of a notice of decommitment and shall indicate whether it reasonably expects the *resource* to operate in accordance with the notice of decommitment, no later than 15 minutes prior to the start of the next *dispatch hour*.

10.2.4 If a *registered market participant* indicates that it reasonably expects to operate in accordance with a notice of decommitment in accordance with section 10.2.3, the *registered market participant* shall immediately notify the *IESO* as soon as possible if it expects its *resource* to operate in a manner that, for any reason, differs materially from the notice of decommitment.

10.2.5 The *IESO* shall use reasonable efforts to ensure that the instructions contained in a notice of decommitment issued in accordance with this section 10.2 with respect to each *GOG-eligible resource*, is consistent with the *pre-dispatch schedule*.

10.2.6 The *IESO* shall not be required to issue a notice of decommitment, or, in the event that the *IESO* does issue a notice of decommitment, shall not be required to satisfy the requirements of section 10.2.5 if:

10.2.6.1 the *security* and *adequacy* of the system would be endangered by implementing the *pre-dispatch schedule*;

10.2.6.2 the *pre-dispatch calculation engine* has failed, or has produced a *pre-dispatch schedule* that is clearly and materially in error;

10.2.6.3 material changes have occurred subsequent to determination of the *pre-dispatch schedule*, including a failure of an element of a *transmission system* or failure of a *resource* to follow *dispatch instructions*;; or

10.2.6.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13.

10.2.7 Notwithstanding sections 10.2.1 and 10.2.3, if there is a failure of *IESO* software, hardware or communication systems during the *pre-dispatch process*:

10.2.7.1 the *IESO* shall issue notices of decommitment to a *GOG-eligible resource* as soon as reasonably practicable after the hour corresponding to the applicable *pre-dispatch calculation engine* run that has not scheduled the *resource* above its *minimum loading point* for the next *dispatch hour*; and

10.2.7.2 the *registered market participant* shall as soon as reasonably practicable acknowledge receipt of such notice of decommitment and shall indicate whether it reasonably expects the *resource* to operate in accordance with the notice of decommitment.

10.3 Day-Ahead Operational Commitment and Pre-Dispatch Operational Commitment

10.3.1 Without limiting the generality of MR Ch.5 s.1.2.1, the *IESO* may, at any time, cancel a *day-ahead operational commitment* or *a pre-dispatch operational commitment* if the cancellation is necessary to maintain the *reliability* of the *IESO-controlled grid*. The *IESO* shall, as soon as practicable, notify the relevant *market participant* of this cancellation.

10.3.2 If a *registered market participant* for a *GOG-eligible resource* expects that satisfying a *day-ahead operational commitment* or a *pre-dispatch operational commitment* would endanger the safety of any person, cause equipment damage, or violate any *applicable law*, the *registered market participant* shall immediately notify the *IESO* of that expectation, and shall withdraw from the *day-ahead operational commitment* or *pre-dispatch operational commitment*.

10.3.3 If a *registered market participant* for a *GOG-eligible resource* with a *day-ahead operational commitment* or a *pre-dispatch operational commitment* expects, for any reason other than those set out in section 10.3.2, that the *resource* will not satisfy the commitment, the *registered market participant* shall immediately notify the *IESO* of its request to withdraw from the *day-ahead operational commitment* or *pre-dispatch operational commitment*. If, in the *IESO's* judgment, the withdrawal will impair the ability of the *IESO* to maintain the *security* or *adequacy of the electricity system*, the *IESO* may refuse such request.

10.3.4 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource* shall submit an *offer* for any remaining *dispatch hours* of its *minimum generation block run-time* for a

day-ahead operational commitment or a *pre-dispatch operational commitment* carried over from the previous *dispatch day*.

10.3.5 A *registered market participant* for a *dispatchable generation resource* that is a *non-quick start resource* and is not a nuclear *generation resource* shall submit an *offer* for any *dispatch hours* prior to or following a *day-ahead operational commitment* or a *pre-dispatch operational commitment* in which the *registered market participant* reasonably expects the *dispatchable generation resource* to be injecting at less than its *minimum loading point* in at least one *dispatch interval*.

11. ~~Generator~~ Generation Resource and Electricity Storage ~~Participant~~Resource Synchronization Procedures

11.1 Introduction

11.1.1 No *generator* or *electricity storage participant*:

11.1.1.1 may ~~physically~~ *connect* and synchronize a *generation resource* or an *electricity storage resource* to the *IESO-controlled grid* or de-synchronize and disconnect from the *IESO-controlled grid*; or

11.1.1.2 if it is an *embedded generator* or *embedded electricity storage participant*, may ~~physically~~ *connect* and synchronize a *resource* associated with an embedded *generation unit* or an *electricity storage unit* to the embedding *facility* or de-synchronize and disconnect from the embedding *facility*,

except as provided in MR Ch.~~apter~~ 4 and in this section 11.

11.1.2 All *generation facilities* located within the *IESO control area* are subject to the provisions of this section 11 except for:

11.1.2.1~~(a)~~ *self-scheduling generation facilities* with name-plate ratings of less than 10 MW~~;~~;

11.1.2.2~~(b)~~ *intermittent generators*, any *generators* classified as *minor generation facilities* or as *small generation facilities*~~;~~;

11.1.2.3~~(c)~~ *generation facilities* that, for the purposes of the application of the provisions of this section 11, have been designated by the *IESO* as not impairing the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*~~;~~; and

11.1.2.4 ~~(d)~~ any *generators* exempt from the provisions of the Electricity Act, 1998 by regulation made thereunder.

11.1.3 [Intentionally left blank]

11.1.4 All *electricity storage facilities* located within the *IESO control area* are subject to the provisions of this section 11 except for:

11.1.4.1 ~~(a)~~ *self-scheduling electricity storage facilities* with an *electricity storage facility* size of less than 10 MW~~;~~;

11.1.4.2 ~~(b)~~ any *electricity storage facilities* classified as *minor electricity storage facilities* or as *small electricity storage facilities*~~;~~; and

11.1.4.3 ~~(c)~~ *electricity storage facilities* that, for the purposes of the application of the provisions of this section 11, have been designated by the *IESO* as not impairing the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*.

11.2 Process for Synchronization

Quick Start Resources

11.2.1 A *registered market participant* for a *quick start resource* ~~*generator*~~ that receives a *dispatch instruction* and acknowledges receipt of the *dispatch instruction* in accordance with section 7.1.2A ~~intends to~~may *connect* and synchronize a *generation resource* ~~*unit*~~ or *electricity storage* ~~*unit*~~*resource* to the *IESO-controlled grid* or embedding *facility*, as the case may be.~~;~~ ~~must notify the *IESO* at least two hours in advance of the intended synchronization time unless an under-generation advisory notice is in force, in which case the *IESO* may reduce the required notification time to that specified in the advisory notice.~~

Non-Quick Start Resources

11.2.2 A *registered market participant* for a *GOG-eligible resource* that receives a *start-up notice* and acknowledges receipt of the *start-up notice* in accordance with section 10.1.4 and that intends to synchronize to the *IESO-controlled grid* or embedding *facility*, as the case may be, shall request the *IESO's* approval for the proposed synchronization plan at least five minutes before the intended synchronization for the *resource*. ~~If a *generator* or *electricity storage participant* does not advise the *IESO* at least two hours in advance of synchronization, or any shorter interval allowed by an under-generation advisory notice, the *IESO* may approve synchronization only if, in the *IESO*'s judgement, synchronization will not impair the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*.~~

11.2.2A Subject to section 11.2.2, a *registered market participant* for a *non-quick start resource* that intends to synchronize to the *IESO-controlled grid* or embedding *facility*, as the case may be, shall request the *IESO's* approval for the proposed synchronization plan at least two hours in advance of the intended synchronization

time unless an under-generation advisory notice is in force, in which case the *IESO* may reduce the required notification time to that specified in the advisory notice.

Approval of Synchronization Plan

11.2.3 The *IESO* shall notify the *registered market participant* for a *non-quick start resource* ~~the generator or electricity storage participant~~ of the *IESO's* acceptance or rejection of the *non-quick start resource's* ~~the generation unit's or electricity storage unit's~~ synchronization plans within ~~5~~ five minutes of receiving such plans. In the event that the *IESO* does not approve synchronization, the *registered market participant* ~~responsible for the registered facility, of which the generation unit or electricity storage unit is a part,~~ must revise its *dispatch data* for the *non-quick start resource* in accordance with section 3.

11.2.4 Receipt by the ~~*generator or electricity storage participant*~~*registered market participant* of the notification of acceptance by the *IESO* under section 11.2.3 ~~gives~~ allows ~~the generator or electricity storage participant~~it ~~the right~~ to synchronize the ~~*generation unit or electricity storage unit*~~ *non-quick start resource* to the *IESO-controlled grid* or the embedding *facility*, as the case may be. However, ~~This right does not preclude~~ the *IESO* may, at any time, ~~from~~ requir~~ing~~e the de-synchronization of a ~~*generation unit or electricity storage unit*~~ *non-quick start resource* in the event of over-generation in accordance with any applicable provisions of these *market rules* relating to over-generation *dispatch*.

11.2.4A If a *registered market participant* for a *non-quick start resource* does not request the *IESO's* approval in advance of synchronization at the appropriate time in accordance with obligations of this section applicable to it or any shorter interval allowed by an under-generation advisory notice, the *IESO* may approve synchronization only if, in the *IESO's* judgement, synchronization will not impair the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*.

Conditions Attached to Synchronization

11.2.5 The exact time of synchronization shall be subject to directions from the *IESO* and to the terms and conditions specified in the *generator's* or *electricity storage participant's connection agreement* or, in the case of a *resource* associated with an embedded *generation unit* or embedded *electricity storage unit*, its connection agreement, in such form as may be prescribed by the *OEB*, with the *distributor* with whom it is *connected.*

Revisions to Synchronization

11.2.6 Without limiting the obligation to provide notice under section 10.1.5, each~~Each~~ *generator* or *electricity storage participant* shall notify the *IESO* of any revisions to its synchronization plans without delay. Upon receipt of such notice, the *IESO* shall re-assess any prior acceptance of a synchronization plan and shall notify the *generator* or *electricity storage participant* accordingly.

11.3 Process for De-synchronization

Quick Start Resources

11.3.1 A *registered market participant* for a *quick start resource* intending to de-synchronize from the *IESO-controlled grid* or embedding *facility*, as the case may be, shall request the *IESO*'s approval five minutes in advance of the intended de-synchronization time. ~~A generator participant intending to de-synchronize a generation unit or electricity storage unit from the *IESO-controlled grid* or embedding *facility*, as the case may be, shall notify the *IESO* one hour in advance of the intended de-synchronization time, unless an advisory notice for over-generation is in effect, in which event the *generation* unit or electricity storage unit may de-synchronize at will subject to the conditions of the advisory notice.~~

Non-quick Start Resources

11.3.1A A *registered market participant* for a *GOG-eligible resource* intending to de-synchronize from the *IESO-controlled grid* or embedding *facility*, as the case may be, that receives a notice of decommitment and acknowledges receipt of the notice of decommitment in accordance with section 10.2.3, shall, once it receives *dispatch instructions* below its *minimum loading point*, request the *IESO's* approval to de-synchronize, unless an advisory notice for over-generation is in effect, in which event the *resource* may de-synchronize at will subject to the conditions of the advisory notice.

11.3.2 Subject to 11.3.1A, a *registered market participant* for a *non-quick start resource* intending to de-synchronize from the *IESO-controlled grid* or embedding *facility*, as the case may be, shall request the *IESO's* approval one hour in advance of the intended de-synchronization time unless an advisory notice for over-generation is in effect, in which event the *resource* may de-synchronize at will subject to the conditions of the advisory notice. ~~If a *generator* or *electricity storage participant* does not advise the *IESO* at least one hour prior to its planned de-synchronization, or any shorter interval allowed by an over-generation advisory notice, the *IESO* may approve de-synchronization only if, in the *IESO*'s judgement, the unit's de-synchronization will not impair the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*.~~

Approval of De-synchronization

11.3.3 The *IESO* shall approve any such request to de-synchronize unless:

11.3.3.1 the *generation* ~~*unit*~~*resource* or *electricity storage* ~~*unit*~~*resource* is operating under the provisions of a *reliability must-run contract* and the *IESO* has directed it to operate;

11.3.3.2 the *IESO* requires the *generation unit* or *electricity storage unit* to remain synchronized to maintain the *security* or *adequacy* of the *electricity system*; or

11.3.3.3 an under-generation advisory notice is in force.

11.3.4 The *IESO* shall notify the ~~*generator or electricity storage*~~ *registered market participant* of the *IESO*'s acceptance or rejection of the *generation* ~~*unit's*~~*resource's* or *electricity storage* ~~*unit's*~~*resource's* de-synchronization plans within 5 minutes of receiving such plans.

11.3.4A If a *registered market participant* for a *generation resource* or *electricity storage resource* does not request the *IESO's* approval prior to its planned de-synchronization at the appropriate time in accordance with the obligations of this section applicable to it or any shorter interval allowed by an over-generation advisory notice, the *IESO* may approve de-synchronization only if, in the *IESO*'s judgement, de-synchronization will not impair the ability of the *IESO* to maintain the *security* or *adequacy* of the *electricity system*.

11.3.5 The exact time of de-synchronization shall be subject to directions from the *IESO* and to the terms and conditions specified in the *generator's* or *electricity storage participant's connection agreement* or, in the case of a *resource* associated with an *embedded generation unit*, or *embedded electricity storage unit*, its *connection agreement*, in such form as may be prescribed by the *OEB*, with the *distributor* with whom it is *connected.*

11.3.6 Receipt by the *generator* or *electricity storage participant* of notification of acceptance by the *IESO* under section 11.3.4 gives the *generator* or *electricity storage participant* the right to commence shut-down of the *generation* ~~*unit*~~*resource* or *electricity storage* ~~*unit*~~*resource*.

11.3.7 Without limiting the obligation to provide notice under section 10.2.4, each~~Each~~ *generator* or *electricity storage participant* shall notify the *IESO* of any revisions to its de-synchronization plans without delay. Upon receipt of such notice, the *IESO* shall re-assess any prior acceptance of a de-synchronization plan and shall notify the *generator* or *electricity storage participant* accordingly.

11.4 Reliability

11.4.1 Notwithstanding any other provision in this section 11, the *IESO* may, to maintain the reliable operation of the *IESO-controlled grid*, direct a *generation resource* or an *electricity storage resource* to either de-synchronize from or to not synchronize to the *IESO-controlled grid*.

12. Status Reports, Advisories, and Protocols

12.1 IESO System Status Reports and Advisory Notices

12.1.1 The *IESO* shall *publish*, in addition to the daily assessments specified in MR Ch.5 s~~ection~~ 7.3.1.4 ~~of Chapter 5~~, system status reports to:

12.1.1.1 to 12.1.1.5 [Intentionally left blank – sections deleted]

12.1.1.6 provide forecasts, with respect to each *dispatch day*, as projected for future *dispatch hours* and as estimated for the current *dispatch hour*,

where appropriate, of expected hourly *demand*, *generation capacity*, *electricity storage capacity*, *energy* capability of *generation* ~~*facilities*~~*resources*, exports and imports of *energy*, projected *energy* shortfalls, and *operating reserve* requirements, *published* at the following times:

~~12.1.1.6.1~~a. 05:30 ~~EST of~~EPT on the ~~*pre-dispatch day*~~ day prior to the relevant *dispatch day*;

~~12.1.1.6.2~~b. 09:00 ~~EST of~~EPT on the ~~*pre-dispatch day*~~ day prior to the relevant *dispatch day*;

~~12.1.1.6.3~~c. after ~~each~~a successful run of the *day-ahead market calculation engine*, on the day prior to the relevant *dispatch day* ~~commitment process, of the *pre-dispatch day*~~;

~~12.1.1.6.4~~d. after ~~15~~20:00 EST, and hourly thereafter, ~~of~~on the ~~*pre-*~~day prior to the relevant *dispatch day*; and

~~12.1.1.6.5~~e. hourly on the *dispatch day;*

12.1.1.7 provide forecasts of expected transmission capacity with all elements in-service, *published* daily, as soon as practicable; and

12.1.1.8 provide forecasts of expected transmission limits with *outages*, for the *dispatch day* and the two days following the *dispatch day*, *published* ~~hourly~~twice each hour on the *dispatch day.*

12.1.2 Where the *IESO publishes* an advisory notice, it shall do so in one of the following forms, as further specified in ~~accordance with~~ the applicable *market manual*:

12.1.2.1 an alert notice, which shall provide situational awareness and ~~provide~~ time for advanced preparations;

12.1.2.2 a warning notice, which shall indicate the actions the *IESO* intends to take if the *IESO-administered markets* do not or cannot respond sufficiently to eliminate an identified or potential problem; or

12.1.2.3 an action notice, which shall indicate the actions the *IESO* and *market participants* must take in order to eliminate an identified or potential problem.

12.1.3 The *IESO* shall *publish*, in accordance with the applicable *market manual*, advisory notices ~~for the following reasons~~ in the following circumstances:

12.1.3.1 if a major change in expected *generation capacity, electricity storage capacity* or *transmission capacity* has occurred since the last system status report was issued;

12.1.3.2 if the *IESO* expects over-generation, under-generation or shortfalls in *operating reserve* or *contracted ancillary services*, or an advisory of the total MW of *energy* being directed to submit *bids* or *offers* from the aggregate of *reliability must run resources* under *reliability must run contracts*;

12.1.3.3 if the *IESO* expects an *emergency operating state*, a *high-risk operating state*, or a *conservative operating state*; ~~and~~or

12.1.3.4 if the *IESO* is suspending or resuming operation of all or part of the *IESO-administered markets*~~,~~.

12.1.3A The *IESO* may *publish* advisory notices in addition to those in 12.1.3, in accordance with the applicable *market manual*, for any ~~additional~~other reason ~~identified by~~where the *IESO* ~~in which the *IESO* believes~~determines that the *publication* of an advisory notice would be in the interest of the *IESO-administered markets*, *market participants*, or the *IESO-controlled grid*.

12.1.4 Where applicable, the corresponding information related to the advisory notices in section 12.1.3 shall be included by the *IESO* in a subsequent *publication* of a scheduled report under section 12.1.1.

~~12.1.5 The reports referred to in section 12.1.1 and 12.1.3 shall be prepared by the *IESO* in such form and shall contain such information as may be specified in the applicable *market manual*.~~

12.2 Over-Generation and Under-Generation Advisories

12.2.1 If the *IESO* issues an over-generation ~~system~~advisory notice pursuant to section 12.1.3, the *IESO* shall, unless the *IESO* determines that it is not able to do so for operational or system *security* reasons, and notwithstanding any notification requirements or other conditions specified elsewhere in these *market rules*:

12.2.1.1 solicit and accept additional or revised *bids* ~~from *dispatchable loads* or *electricity storage facilities* willing~~ to increase *demand* in response to low prices;

12.2.1.2 allow ~~*generators*~~ *generation units* or *electricity storage* ~~*facilities*~~*units* or any associated *resources* to de-synchronize from the *IESO-controlled grid* or the embedding *facility*, as the case may be, without penalty, some or all of the *generation units* or *electricity storage units* or any associated *resources* within any ~~*registered*~~ *facility* in locations designated by the *IESO*; and/or

12.2.1.3 solicit and accept revised *offers* ~~from *generators, electricity storage participants* or *wholesale sellers*~~ that will decrease generation ~~resources~~or injection of *energy* in *response* to low prices, in locations designated by the *IESO*.

12.2.2 If the *IESO* issues an under-generation advisory notice pursuant to section 12.1.3, the *IESO* shall, unless the *IESO* determines that it is not able to do so for operational or system *security* reasons, and notwithstanding any notification requirements or other conditions specified elsewhere in these *market rules*:

12.2.2.1 solicit and accept additional or revised *bids* ~~from *dispatchable loads* and *electricity storage facilities*~~ that will reduce ~~load~~*demand* in *response* to higher prices;

12.2.2.2 allow ~~*generators*~~*generation units* or *electricity storage* ~~*facilities*~~*units* or any associated *resources* to synchronize to the *IESO-controlled grid* or the embedding *facility*, as the case may be, without penalty, some or all of the *generation units* or *electricity storage units* or any associated *resources* within any ~~*registered*~~ *facility* in locations designated by the *IESO*; and/or

12.2.2.3 solicit and accept additional or revised *offers* ~~from *generators, electricity storage participants* or *wholesale sellers*~~ that will increase generation ~~resources~~ or injections of *energy* in *response* to higher prices, in locations designated by the *IESO*.

12.2.3 If the *IESO* issues an *operating reserve* shortfall advisory notice pursuant to section 12.1.3, the *IESO* shall, within the period specified in the advisory notice, accept additional or revised *offers* for *operating reserve*.

13. Suspension of Market Operations

13.1 Introduction

13.1.1 The *IESO* may, or may be required to, suspend the operation of all or part of the *IESO-administered markets* in accordance with this section 13. ~~For purposes of this section 13, unless otherwise noted the term "*market operations*" shall mean the operation of all or part of the *IESO-administered markets.*~~

13.1.2 This section 13 sets forth the procedures the *IESO* must follow in:

13.1.2.1 determining whether to declare a suspension of *market operations;*

13.1.2.2 directing the operation of the *IESO-controlled grid* during suspension of *market operations*; and

13.1.2.3 restoring *market operations* once the conditions triggering suspension are eliminated.

13.1.3 This section 13 also sets forth the requirements that *market participants* must meet immediately prior to, during, and immediately after a suspension of *market operations*.

13.2 Market Suspension Events

13.2.1 Subject to section 13.3, the *IESO* may suspend *market operations* if it determines that any of the conditions described in section 13.2.4 exists or is imminent.

13.2.2 As soon as practical the *IESO* shall notify the *IESO Board,* the *OEB* and relevant government authorities of any suspension of *market operations* pursuant to this section 13.

13.2.3 Upon being notified under section 13.2.2, the *IESO Board* may determine whether to continue the suspension or to resume normal *market operations* under such conditions as the *IESO Board* may specify.

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

13.2.4.1 *market operations* cannot be continued in a normal manner due to a failure in the software, hardware or communication systems that support *market operations*;

13.2.4.2 a major blackout;

13.2.4.2A the *IESO-controlled grid* breaks up into two or more *electrical islands*~~electrical islands~~;

13.2.4.3 an *emergency* situation requiring the *IESO* to evacuate its principal control centre and move to a backup control centre, under conditions and subject to the requirements of MR Ch.~~apter~~ 5; or

13.2.4.4 a declaration of an emergency by the Premier of Ontario or a direction from the *Minister* to the *IESO* or to a *market participant* to implement an *emergency* ~~preparedness~~*preparedness plan*.

13.3 ~~Insufficient~~ Reasons for Market Suspension

13.3.1 Notwithstanding section 13.2.4, the *IESO* may suspend *market operations* in *response* to an event described in that section only if the *IESO* determines that its ability to operate the *IESO-administered markets* in accordance with these *market rules* has or will become substantially impaired.

13.3.2 The *IESO* shall not suspend *market operations* solely because:

13.3.2.1 the *market price* has reached positive or negative ~~*MMCP*~~*maximum market clearing price*; or

13.3.2.2 some *load* has been *curtailed*.

13.4 IESO Declaration of Market Suspension

13.4.1 Only a declaration by the *IESO* may suspend *market operations*. If the *IESO* declares a suspension of *market operations*, the *IESO* shall:

13.4.1.1 immediately notify *market participants*; and

13.4.1.2 issue to *market participants* a market suspension notice via such means as the *IESO* determines will ensure timely notification, informing *market participants* of the nature and scope of the suspension and its expected duration, if known.

13.4.2 Any suspension of *market operations* shall commence at the start of the next *dispatch interval* after the *IESO* makes the declaration, unless the *IESO* suspends *market operations* to protect or restore *reliability*, in which case the suspension shall commence at the time the *IESO* makes the declaration.

13.4.3 The *IESO* may not declare a retroactive suspension of *market operations*.

13.5 IESO Responsibilities During Market Suspension

13.5.1 While a suspension of *market operations* is in effect, the *IESO* shall:

13.5.1.1 prescribe and apply procedures for restoring and maintaining *reliable* operation of the *electricity system* and restoring *market operations* as rapidly as practical, consistent with the safety of persons and *facilities*;

13.5.1.2 endeavour to continue use of normal market information, scheduling and pricing procedures to the extent practical;

13.5.1.3 prescribe and apply *administrative prices* in accordance with section 8.4A.6~~8~~;

13.5.1.4 suspend the *day-ahead market* when a suspension of the *real-time market* is expected to be in effect for future *dispatch days*; ~~[Intentionally left blank]~~

13.5.1.5 provide timely information to *market participants* concerning the reasons for the suspension and efforts by the *IESO* to resume normal *market operations*; and

13.5.1.6 issue directions, through market suspension advisory notices to *market participants*, that will enable the *IESO* to continue *reliable* operations, continue non-suspended *market operations* and resume normal *market operations* as soon as practical.

~~13.5.2 [Intentionally left blank]~~

~~13.5.2.1 [Intentionally left blank]~~

~~13.5.2.2 [Intentionally left blank]~~

13.6 Participant Responsibilities and Compensation

13.6.1 If the *IESO* suspends *market operations*~~market operations~~, each *market participant* shall:

13.6.1.1 comply with the *IESO's* market suspension advisory notices and any other directions issued by the *IESO*;

13.6.1.2 conduct their operations and interactions with the *IESO* in a manner consistent with such advisory notices and directions; and

13.6.1.3 upon resumption of normal *market operations*, resume normal operations and interactions with the *IESO* pursuant to these *market rules*.

13.6.2 The *IESO* may issue *dispatch instructions* while a suspension of *market operations* is in effect and shall compensate *market participants* for following these *dispatch instructions* based on *administrative prices* established in accordance with section 8.4A.6~~8~~ rather than on market-determined prices.

~~13.6.3 [Intentionally left blank]~~

~~13.6.3A [Intentionally left blank]~~

~~13.6.3A.1 [Intentionally left blank]~~

~~13.6.3A.2 [Intentionally left blank]~~

~~13.6.3B [Intentionally left blank]~~

~~13.6.3B.1 [Intentionally left blank]~~

~~13.6.3B.2 [Intentionally left blank]~~

~~13.6.4 [Intentionally left blank]~~

13.7 Ending and Reporting on Market Suspension

13.7.1 The *IESO* shall monitor the conditions which triggered the suspension of *market operations* and, subject to any decision or direction that the *IESO Board* may have given pursuant to section 13.2.3, shall issue a market advisory notice declaring the end of the suspension:

13.7.1.1 as soon as the *IESO* determines that normal *market operations* are possible and will maintain *reliable* system operations; and

13.7.1.2 indicating the *dispatch hour* for which normal *market operations* are to resume, providing at least one hour advance notice.

The *IESO* may, if circumstances warrant and in order to resume normal *market operations* as soon as possible, issue a market advisory declaring the end of the suspension prior to issuing the notice specified in section 13.2.2.

13.7.2 The *IESO* shall, immediately following the end of the suspension of *market operations*, begin a review of events leading to and occurring during the suspension. The *IESO* may require *market participants* to submit information regarding their operations immediately prior to and during the suspension and to assist the *IESO* in ~~analysing~~analyzing the suspension.

13.7.3 Within 10 *business days* following the resumption of normal *market operations*, the *IESO Board* shall provide to all *market participants,* the *OEB* and relevant government authorities a preliminary report describing:

13.7.3.1 the circumstances that triggered suspension of *market operations*;

13.7.3.2 the date and time period of the suspension of *market operations;*

13.7.3.~~2~~3 the steps taken by the *IESO* during the period of suspension to ensure *reliable* operations and remedy the causes of the suspension;

13.7.3.~~3~~4 the actions of *market participants* during the suspension; and

13.7.3.~~4~~5 any conclusions or recommendations for avoiding similar suspensions in the future.

13.7.4 The *IESO Board* shall provide a final report containing information in the nature of that described in section 13.7.3 to *market participants* and the public as soon as it is practicable to do so.

13.7.5 If the *IESO Board* determines that one or more corrective measures by *market participants* are warranted to avoid the recurrence of a suspension of *market operations*, the *IESO* may direct the affected *market participants* to implement the corrective measures and the affected *market participants* shall implement the corrective measures as soon as practicable.

13.7.6 A *market participant* directed by the *IESO* to implement corrective measures under section 13.7.5 may apply for compensation from the *IESO* where compliance with the *IESO's* direction results in costs or damages to the *market participant*.

13.7.7 Any disputes regarding the compensation referred to in section 13.7.6 shall be resolved using the dispute resolution process set forth in MR Ch.3 s.2~~section 2 of Chapter 3~~.

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18. Capacity Auctions

18.1 Purpose of Capacity Auctions

18.1.1 The *capacity auctions* will acquire *auction capacity* through a competitive auction.

18.1.2 The *IESO* shall specify and *publish* a target capacity amount to be acquired in each *capacity auction*, as specified in the applicable *market manual.*

18.1A Capacity Auction – Transitional Market Rules

18.1A.1 For the purposes of participation in a *capacity auction, market rules* and *market manuals* that specifically concern *capacity auction* participation, the satisfaction of *capacity obligations,* or the performance of requirements directly related to that participation, shall remain in effect from the date of the *capacity auction* until the

end of its associated *commitment period,* except as otherwise provided in sections 18.1A.1.1 and 18.1A.3.

18.1A.1.1 Nothing in this section 18.1A shall limit the effectiveness of a *market rule* amendment or *market manual* amendment that expressively excludes the application of sections 18.1A.1 and 18.1A.2.

18.1A.2 Except as otherwise provided in sections 18.1A.1.1 and 18.1A.3, changes to the *market rules* and applicable *market manuals* that specifically concern *capacity auction* participation, the satisfaction of *capacity obligations*, or the performance of requirements directly related to that participation, and which are brought into effect between the date of a given *capacity auction* and the end of its associated *commitment period*, shall be applicable to subsequent *capacity auctions* and their associated *commitment periods.*

18.1A.3 Nothing in this section 18.1A shall limit the effectiveness of an *urgent rule amendment.*

18.1A.4 The *IESO* shall maintain a *published* archive of *market rules* and applicable *market manuals* in effect on the date of a *capacity auction* for a period of 2 years following the end of its associated *commitment period.*

18.2 Participation in Capacity Auctions

18.2.1 No person may participate in a *capacity auction* nor receive a *capacity obligation* unless that person has:

18.2.1.1 been authorized by the *IESO* as a *capacity auction participant* in accordance with MR Ch.~~3~~2 s.3~~section 3 of Chapter 2~~ and in accordance with the applicable *market manual*;

18.2.1.2 submitted to the *IESO* a *capacity qualification request*, using forms and procedures as may be established by the *IESO* in the applicable *market manual*; and

18.2.1.3 no less than five *business days* prior to the date on which a *capacity auction* is to be conducted, provided to the *IESO* a *capacity auction deposit,* in one or both of the forms set forth in section 18.4.

18.2.2 The following provisions of the *market rules* shall not apply to a *capacity auction participant* that is authorized by the *IESO* to participate only in a *capacity auction* with an *hourly demand response resource*:

18.2.2.1 MR Ch.~~Chapters~~ 4, 5, and 6;

18.2.2.2 Chapter 7 other than this section 18; and

18.2.2.3 MR Ch.~~Chapters~~ 8 and 10.

18.2.3 A *capacity auction participant* who obtains a *capacity obligation* shall apply to become authorized by the *IESO* as a *capacity market participant* in accordance with MR Ch.2 s.3~~section 3 of Chapter 2~~.

18.2A Capacity Auction - Capacity Qualification

18.2A.1 For each *obligation period* in a *capacity auction*, the *IESO* shall determine the *unforced capacity* of each *capacity auction resource* where:

18.2A.1.1 the *unforced capacity* of a *capacity auction eligible generation resource*, a *capacity auction eligible storage resource*, or a *capacity dispatchable load resource* is calculated as:

UCAP = ICAP × *availability de-rating factor* x *performance adjustment factor*

18.2A.1.2 the *unforced capacity* of a *system-backed capacity auction eligible import resource* is calculated as:

UCAP = *ICAP* × *performance adjustment factor*

18.2A.1.3 The *unforced capacity* of a *generator-backed import resource* is calculated as:

UCAP = (exUCAP + esfICAP ×*availability de-rating factor*) x *performance adjustment factor*

Where:

a. 'exU*CAP'* is the total equivalent capacity (in MW) for all *generator-backed import contributors* that are *generation units*, as determined by the applicable *control area operator* and provided to the *IESO* in accordance with the applicable *market manual;*

b. 'esfICAP' is the total *ICAP* (in MW)of all *generator-backed import contributors* that are *electricity storage units,* as provided to the *IESO* in accordance with the applicable *market manual.*

18.2A.1.4 the *unforced capacity* of an *hourly demand response resource* is calculated as:

UCAP = ICAP × *performance adjustment factor*

18.2A.2 No *capacity auction resource* may participate in a *capacity auction*, nor receive a *capacity obligation*, in respect of any *obligation period* in relation to which the *capacity auction resource* has an *unforced capacity* of less than one MW.

18.2A.3 The *IESO s*hall notify each *capacity auction participant* of the *unforced capacity* for each of the *capacity auction participant's capacity auction resources* on the date specified in accordance with section 18.5.4.1A.

18.3 Calculation of Capacity Auction Deposits

18.3.1 Following the determination of *unforced capacity* in accordance with section 18.2A, the *IESO* shall determine for each *capacity auction participant*, a *capacity auction deposit* for a *capacity auction* as specified in the applicable *market manual*.

18.3.2 The *IESO* shall review the *capacity auction deposit* and *capacity ~~auction~~ prudential support* of a *capacity transferee* upon receipt of a request for a *capacity obligation* transfer in accordance with section 18.9.1. As a result of a transfer request, the *IESO* may increase the *capacity auction deposit* or *capacity ~~auction~~ prudential support* of a *capacity transferee* and the *IESO* shall notify the *capacity transferee* of any such increase.

18.3.3 Where the amount of a *capacity auction deposit* provided by a *capacity auction participant* exceeds the amount required by the *IESO*, the *IESO* shall return the excess amount to the *capacity auction participant* within five *business days* of such a request from the *capacity auction participant*. Otherwise, that amount shall be held by the *IESO* and shall form part of that *capacity auction participant's capacity auction deposit* for its participation in a subsequent *capacity auction*.

18.4 Capacity Auction Deposits

18.4.1 A *capacity auction deposit* shall be in one or both of the following forms:

18.4.1.1 an irrevocable commercial letter of credit provided by a bank named in a Schedule to the *Bank Act*, (Canada), S.C. 1991, c. 46; or

18.4.1.2 a cash deposit made with the *IESO* by or on behalf of the *capacity auction participant.*

18.4.2 Where all or part of a *capacity auction deposit* is in the form of a standby letter of credit, the following provisions shall apply:

18.4.2.1 the letter of credit shall provide that it is issued subject to either The Uniform Customs and Practice for Documentary Credits, 1993 Revision, ICE Publication No. 500 or The International Standby Practices 1998;

18.4.2.2 the *IESO* shall be named as beneficiary in the letter of credit, the letter of credit shall be irrevocable and partial draws on the letter of credit shall not be prohibited;

18.4.2.3 the only condition on the ability of the *IESO* to draw on the letter of credit shall be the delivery of a certificate by an officer of the *IESO* that a specified amount is owing by the *capacity auction participant* to the *IESO* and that, in accordance with the provisions of the *market rules*, the *IESO* is entitled to payment of that specified amount as of the date of delivery of the certificate;

18.4.2.4 the letter of credit shall either provide for automatic renewal (unless the issuing bank advises the *IESO* at least thirty days prior to the renewal date that the letter of credit will not be renewed) or be for a term of at least one (1) year. Where the *IESO* is advised that a letter of credit is not to be renewed or the term of the letter of credit is to expire, the *capacity auction participant* shall arrange for and deliver additional *capacity auction deposits* if the *capacity auction participant* intends to continue to participate in a *capacity auction*. If such additional *capacity auction deposits* are not received by the *IESO* ten (10) *business days* before the expiry of a letter of credit, the *IESO* shall be entitled as of that time to payment of the full face amount of the letter of credit which amount, once drawn by the *IESO*, shall be treated as a *capacity auction deposit* in the form of cash; and

18.4.2.5 by including a letter of credit as part of a *capacity auction deposit*, the *capacity auction participant* represents and warrants to the *IESO* that the issuance of the letter of credit is not prohibited in any other agreement, including without limitation, a negative pledge given by or in respect of the *capacity auction participant*.

18.4.3 Notwithstanding any other provision of these *market rules*, a person that applies for authorization to participate in the *capacity auction* and that has not applied for authorization to participate, or is not participating, in any other *IESO-administered market* shall not be required to comply with any requirements for authorization other than those set forth in sections 18.2.1.1 to 18.2.1.3.

18.4.4 In the event a *capacity auction participant* has not satisfied the applicable eligibility requirements specified in sections 19.2, 19.3, 19.6, 19.8, 19.9A, or 19.10 ~~of Chapter 7~~ prior to the start of the applicable *obligation period* and has not elected to buy-out the *capacity obligation* in accordance with MR Ch.9 s.~~section~~ 4.~~7~~13.9 ~~of Chapter 9~~, the *IESO* shall revoke the *capacity obligation* and the *capacity auction participant* shall, at the *IESO's* sole discretion, forfeit its *capacity auction deposit.*

18.5 Capacity Auction Parameters

18.5.1 The *IESO* shall conduct *capacity auctions* at least on an annual basis to acquire *capacity* for a future one-year *commitment period*. In each *capacity auction* the *IESO* shall acquire *auction capacity* for each *obligation period* as specified in the applicable *market manual*.

Demand Curve, Zonal Constraints and Pre-Auction Reports

18.5.2 The *IESO* shall, in accordance with the applicable *market manual*, *publish* a pre-auction report in advance of each *capacity auction*, including the following *capacity auction* demand curve reference points:

18.5.2.1 a *target capacity* in accordance with section 18.1.2;

18.5.2.2 a *capacity auction reference price*;

18.5.2.3 a maximum and minimum *capacity auction clearing price*;

18.5.2.4 [Intentionally left blank – section deleted]

18.5.2.5 a maximum auction capacity limit at the maximum *capacity auction clearing price* that a *capacity auction* shall clear; and

18.5.2.6 a maximum auction capacity limit that a *capacity auction* shall clear.

18.5.3 The *IESO* shall define *capacity auction zonal constraints* for each *capacity auction* and the *IESO* shall *publish*, in the pre-auction report, those requirements as specified in the applicable *market manual*.

18.5.4 The *IESO* shall specify and *publish* in the pre-auction report the following timelines associated with a *capacity auction*:

18.5.4.1 the deadline to submit a *capacity qualification request* pursuant to section 18.2.1.2;

18.5.4.1A the date on which the *IESO* shall notify *capacity auction participants* of the *unforced capacity* for each *capacity auction resource*;

18.5.4.2 the deadline for a *capacity auction participant* to submit a *capacity auction deposit* in accordance with section 18.2.1.3;

18.5.4.3 the dates on which a *capacity auction* participant may submit *capacity auction offers* for a *capacity auction*;

18.5.4.4 the period over which the *IESO* shall conduct the *capacity auction*; and

18.5.4.5 the date of *capacity auction* post-auction reporting in accordance with sections 18.8.1 and 18.8.2.

18.5.5 The *IESO* shall define the total *auction capacity* that may be provided by all *system-backed capacity import resources* and *generator-backed capacity import resources* in a *capacity auction* for each obligation period. The *IESO* shall publish, in the pre-auction report, these requirements as specified in the applicable *market manual*.

18.5.6 The *IESO* shall define the total *auction capacity* that may be provided by all *system-backed capacity import resources* and *generator-backed capacity import resources* on each applicable *intertie* in a *capacity auction* for each obligation period. The *IESO* shall publish, in the pre-auction report, these requirements as specified in the applicable *market manual*.

18.6 Capacity Auction Offers

18.6.1 A *capacity auction offer*:

18.6.1.1 may be submitted or revised by the *capacity auction participant* on the dates specified in accordance with section 18.5.4 and the applicable *market manual*;

18.6.1.2 shall only be applicable to the *obligation periods* for which a *capacity auction participant* has submitted a *capacity auction offer*, in accordance with the applicable *market manual*; and

18.6.1.3 shall be time stamped by the *IESO* when received.

18.6.2 A *capacity auction offer* shall only be submitted in respect of a given *capacity auction* if:

18.6.2.1 the *capacity auction participant* complies with the *capacity auction participant* requirements in section 18.2.1; and

18.6.2.2 the *capacity auction participant* has not been disqualified from full or partial participation in the *capacity auction* pursuant to sections 19.4.8, 19.5.4, 19.7.4, 19.9.4 or 19.11.4.

18.6.3 A *capacity auction offer* may include up to twenty *price-quantity* pairs for each *obligation period* and shall comply with the following:

18.6.3.1 the *capacity auction offer* shall be for and applicable over an entire *obligation period* associated with a *capacity auction*;

18.6.3.2 the *capacity auction offer* price in any *price-quantity pair* shall:

- be expressed in dollars and whole cents per MW-day of *auction capacity* to be provided in each hour of the *availability window* throughout the *obligation period* associated with that *capacity auction*;
- be greater than or equal to $0.00/MW-day;
- not exceed the applicable maximum *capacity auction clearing price;* and
- increase as the associated *capacity auction offer* quantity increases.

18.6.3.3 the *capacity auction offer* quantity in any *price-quantity* pair shall be expressed in MW to not more than one decimal place and the total *offered* quantity shall not exceed the *unforced capacity* of the *capacity auction resource*; and

18.6.3.4 the *capacity auction offer* shall indicate whether the *capacity auction participant* is willing to clear a *capacity auction* with the full amount of *auction capacity offered* in a lamination or a partial amount of the *auction*

capacity offered in a lamination, in accordance with the applicable *market manual*.

18.7 Capacity Auction Clearing Prices and Quantities

18.7.1 The *IESO* shall determine a *capacity auction* demand curve to be utilized for each *obligation period* based upon the *capacity auction* parameters detailed in the pre-auction report pursuant to section 18.5 and in accordance with the applicable *market manual*.

18.7.2 The *IESO* shall, in each *capacity auction*, determine for each *obligation period* the *capacity auction clearing price* in accordance with the applicable *market manual*.

18.7.3 The *IESO* shall, in each *capacity auction*, determine for each obligation period the *capacity obligation* for each *capacity auction* participant's *capacity auction resource(s)* in accordance with section 18.7.5 and the applicable *market manual*.

18.7.4 The *IESO* shall, for each *capacity auction*, determine for each *obligation period* associated with the *capacity auction*:

18.7.4.1 the *capacity auction clearing prices* for each electrical zone identified in the pre-auction report; and

18.7.4.2 the zonal *capacity obligation* for each *capacity auction* participant's *capacity auction resource(s)*,

18.7.5 If two or more *capacity auction participants* submit a *capacity auction offer* at the same price*,* for the last available quantity, the *capacity auction offer* with the earlier time stamp shall be selected as the successful *capacity auction offer*, in accordance with the applicable *market manual.*

18.8 Post-Auction Notification and Publication

18.8.1 The *IESO* shall, as soon as practicable following the conclusion of a *capacity auction*, *publish* the following in accordance with the applicable *market manual*:

18.8.1.1 the *capacity auction* clearing price;

18.8.1.2 the amount of *auction capacity* that has been acquired in each electrical zone; and

18.8.1.3 those *capacity auction* participants who received a *capacity obligation* and all respective *capacity obligations.*

~~18.8.1.4 [Intentionally left blank – section deleted]~~

18.8.2 The *IESO* shall, following the conclusion of a *capacity auction*, issue post-auction reports to each *capacity auction participant* by the date specified in accordance with section 18.5.4.5, to detail the *capacity auction offers* that have cleared in the

capacity auction and the associated *capacity obligations* and *cleared ICAPs* for each *obligation period* in accordance with the applicable *market manual*:

18.8.2.1 the *cleared ICAP* is calculated as:

$$cleared\ ICAP = cleared\ UCAP \times \left(\frac{1}{availability\ de{-}rating\ factor}\right)$$

18.9 Capacity Obligation Transfers

18.9.1 A *capacity transferor* may, subject to *IESO* approval and in accordance with the applicable *market manual*, request a transfer of all or a portion of its *capacity obligation* to a *capacity transferee* provided that the following criteria are met:

18.9.1.1 the quantity to be transferred does not exceed the difference between the *capacity transferee's unforced capacity* of a *capacity auction resource* for the applicable *obligation period,* and its existing *capacity obligation* of such *capacity auction resource* for the applicable *obligation period*;

18.9.1.1.1 [Intentionally left blank – section deleted]

18.9.1.2 the *capacity transferor* provides written confirmation to the *IESO* from the *capacity transferee* of its willingness to accept the transfer of a *capacity obligation* from the *capacity transferor*;

18.9.1.3 the *capacity obligation* transfer shall consist of the same attributes (e.g. physical or virtual), as detailed in the applicable *market manual,* as the *capacity transferor's capacity obligation*;

18.9.1.4 the quantity to be transferred is in increments of 0.1MW, and the resulting *capacity obligations* for both the *capacity transferor* and *capacity transferee* following the transfer shall be 0 MW, or greater than or equal to one MW; and

18.9.1.5 [Intentionally left blank – section deleted]

18.9.1.6 [Intentionally left blank – section deleted]

18.9.1.7 [Intentionally left blank – section deleted]

18.9.1.8 *capacity obligation* transfers must not result in the violation of any constraint as defined in the pre-auction report

18.9.1A Where the *capacity obligation* is transferred between electrical zones, the *capacity transferee* shall be settled based upon the *capacity auction clearing price* received by

the *capacity transferor* when the *capacity obligation* first cleared the *capacity auction* in accordance with the applicable *market manual*.

18.9.2 For each transfer request that satisfies the criteria in section 18.9.1, the *IESO* shall determine the *capacity transferee's* revised *capacity auction deposit* and/or *capacity prudential support obligation*, as applicable, in accordance with section 18.3.2 and MR Ch.2 s~~ection~~ 5B.3.3 ~~of Chapter 2~~.

18.9.3 The *capacity transferee* shall provide the *IESO*, within five *business days* of receiving notification from the *IESO* or within such a longer period of time as may be agreed between the *IESO* and the *capacity transferee*, any additional *capacity auction deposit* and/or *capacity prudential support obligation* that may be required as a result of a transfer request.

18.9.4 After the revised *capacity auction deposits* and/or *capacity prudential support obligations* have been satisfied by the *capacity transferee*, the *IESO* shall notify the *capacity transferor* and *capacity transferee* of its approval or rejection, and the *IESO* shall *publish* updated post-auction reports pursuant to section 18.8. If the *IESO* approves the transfer, the *capacity transferor* may request a reassessment of its *capacity auction deposits* and/or *capacity prudential support obligation* to reflect its revised *capacity obligation* and the *IESO* shall remit any excess *capacity auction deposits* and/or *capacity prudential support obligation*.

19. Capacity Market Participants with Capacity Obligations

19.1 Purpose

19.1.1 This section details how a *capacity market participant* must satisfy a *capacity obligation* with a *capacity auction resource*.

19.1.2 *Capacity auction resources* eligible to satisfy a *capacity obligation* are:

19.1.2.1 an *hourly demand response resource*;

19.1.2.2 a *capacity dispatchable load resource*;

19.1.2.3 a *capacity generation resource*;

19.1.2.4 a *system-backed capacity import resource*;

19.1.2.5 a *capacity storage resource*; or

19.1.2.6 a *generator-backed capacity import resource*.

~~19.1.3 [Intentionally left blank – section deleted]~~

19.2 Eligibility Requirements for Hourly Demand Response Resources

19.2.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* with an *hourly demand response resource* provided that the *capacity market participant*:

19.2.1.1 demonstrates to the satisfaction of the *IESO* that it can provide the *capacity obligation*, as specified in the applicable *market manual*;

19.2.1.2 registers its *facilities* and *demand response contributors* as applicable, to the satisfaction of the *IESO*, in accordance with the applicable *market manual*. The *capacity market participant* shall not modify, vary or amend in any material respect any of the features or specifications of any *facility* without first requesting *IESO* authorization and approval in accordance with the applicable *market manual*;

19.2.1.3 [Intentionally left blank – section deleted]

19.2.1.4 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.~~ection~~ 5 ~~of Chapter 2~~.

19.2.2 The *IESO* may refuse the participation of an *hourly demand response resource* in a future *capacity auction* if the resource's participation would negatively impact the *reliable* operation of the *IESO-controlled grid*.

19.2.3 The *IESO* may remove or temporarily remove a *capacity market participant's hourly demand response resource* from its participation as a *capacity market participant* if the *resource's* continued participation would negatively impact the *reliable* operation of the *IESO-controlled grid.* A *capacity market participant* that is removed pursuant to this section 19.2.3 shall not receive an availability payment in accordance with section 19.4.1 for the duration of the removal.

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 MR Ch.~~apter~~ 2~~,~~ ~~sections 5A and~~s.ection ~~8~~;

19.2.4.2 MR Ch.~~apter~~ 5, other than ~~section~~ss.ections ~~1~~.2.1 to 1.2.3, 2.3, 2.4, 5.8 and 5.9;

19.2.4.3 MR Ch.~~apter~~ 7 s.~~ection~~ 7; and

19.2.4.4 MR Ch.~~apters~~ 6, 8, 10.

19.2.5 Subject to section 19.2.6, *load equipment* that is associated with a *non-dispatchable load* may be registered as a *demand response contributor*, 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 requirements in the *market rules* that are applicable to a *wholesale consumer* 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.

19.3 Eligibility Requirements for Capacity Dispatchable Load Resources

19.3.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* with a *capacity dispatchable load resource*, provided that the *capacity market participant*:

19.3.1.1 demonstrates to the satisfaction of the *IESO* that it can provide the *capacity obligation*, as specified in the applicable *market manual*;

19.3.1.2 is authorized as a *wholesale consumer;*

19.3.1.3 registers its *load facilities* as a *dispatchable load* in accordance with the applicable registration requirements ~~for *wholesale consumers* that are *dispatchable loads*~~. The *capacity market participant* shall not modify, vary or amend in any material respect any of the features or specifications of any *resource* without first requesting *IESO* authorization and approval in accordance with the applicable *market manual*;

19.3.1.4 satisfies the *connection assessment* requirements in accordance with MR Ch.4 s.6~~section 6 of Chapter 4~~, if required by the *IESO* in accordance with the *applicable market manual*;

19.3.1.5 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.5~~section 5 of Chapter 2~~.

~~19.3.2 [Intentionally left blank – section deleted]~~

~~19.3.3 [Intentionally left blank – section deleted]~~

19.4 Energy Market Participation for Hourly Demand Response Resources

19.4.1 A *capacity market participant* with a *capacity obligation* participating with an *hourly demand response resource* shall receive an availability payment during the *obligation period* in accordance with this section and the applicable *market manual.* Availability payments may be offset by non-performance charges in accordance with section MR Ch.9 s.4.~~7~~13~~ 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, or if the applicable pre-

dispatch ~~shadow price~~ *locational marginal price* for an *hourly demand response resource* is equal to or greater than the standby notice price threshold, determined by the *IESO,* for at least one hour during the *dispatch day availability window*, the *IESO* shall issue a standby notice to the applicable *capacity 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 *capacity market participant* by 07:00 EST, the *capacity market participant* shall remove their *bids* for the *hourly demand response resource* as soon as practicable and before 9:00 EST. A capacity *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~~ Subject to 19.4.4B, the *IESO* shall issue an activation notice to a *capacity market participant* ~~ahead of~~no later than two hours before 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 *capacity market participant* has not removed their *bids* in accordance with section 19.4.3, and the applicable *hourly demand response resource* has, for *the pre-dispatch calculation engine* run three hours before the activation period, a *pre-dispatch schedule* less than the *resource's* total *bid* quantity for at least one hour during the *dispatch day availability window*.

19.4.4A Subject to 19.4.4B, the *IESO* shall use reasonable efforts to ensure that the activation notice issued with respect to each *hourly demand response resource* is consistent with the *pre-dispatch schedule* for the *pre-dispatch calculation engine* run three hours before the activation period for that *resource*.

19.4.4B The *IESO* shall not be required to issue an activation notice, or, in the event that the *IESO* does issue an activation notice, shall not be required to satisfy the requirements of section 19.4.4A if:

19.4.4B.1 the *security* and *adequacy* of the system would be endangered by implementing the *pre-dispatch schedule*;

19.4.4B.2 the *pre-dispatch calculation engine* has failed, or has produced a *pre-dispatch schedule* that is clearly and materially in error;

19.4.4B.3 material changes subsequent to determination of the *pre-dispatch schedule*, such as failure of an element of a *transmission system* or failure of a *resource* to follow *dispatch instructions*, have occurred; or

19.4.4B.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13.

19.4.5 If a *capacity market participant* receives an activation notice pursuant to section 19.4.4, the *capacity 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 *capacity market participant* shall notify the *IESO* as soon as practicable.

19.4.6 A *capacity 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 *capacity market participant* does not comply with an activation notice pursuant to this section 19, in accordance with the applicable *market manual*. The *capacity market participant* may also be subject to compliance actions in accordance with MR Ch.3 s.~~ection~~ 6 ~~of Chapter 3~~.

19.4.7 A *capacity market participant* that expects its *hourly demand response resource* to operate in a manner that differs 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 *capacity auction* any *capacity market participant* that fails to reduce its consumption in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Non-performance Events for Hourly Demand Response Resources

19.4.9 In the event of a reduction in the *demand response capacity* of an *hourly demand response resource*, associated with a *capacity obligation* acquired through a *capacity auction*, the *capacity market participant* shall notify the *IESO* as per the procedures and criteria specified in the applicable *market manual*.

~~19.4.9A [Intentionally left blank – section deleted]~~

19.4.10 A *capacity market participant* shall reduce its *bid* to take into account and reflect the maximum *demand response capacity* that it reasonably expects it can provide in accordance with section 3.5.9~~6~~ and due to any non-performance event related to an *hourly demand response resource* in an *obligation period*.

19.4.10A Where a *contributor outage* has occurred and such *contributor outage*:

a. began not more than 14 days prior to the day on which there is an activation; and

b. ends within one hour prior to such activation or within the *activation window* of such activation;

then the *capacity market participant* may *notify* the *IESO* within five *business days* of the activation notice, in accordance with the process and requirements described in the applicable *market manual*.

19.4.10B Where the *IESO* receives a valid *contributor outage* notice pursuant to section 19.4.10A, the *IESO* shall adjust the assessment of the *capacity market participant's* performance as set out in the applicable *market manual.*

Capacity Auction Testing for Hourly Demand Response Resources

19.4.11 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity market participant* with a *capacity obligation* to perform a *capacity auction dispatch test* for each *hourly demand response resource* up to a maximum of two *capacity auction dispatch tests* per *obligation period*.

19.4.11A The *capacity market participant* shall perform a *capacity auction capacity test* once per *obligation period* for each *hourly demand response resource*, in accordance with the applicable *market manual*. The *capacity auction capacity test* shall occur within a five *business day* testing window determined by the *IESO*. The *IESO* shall provide notification to a *capacity market participant* of the *capacity auction capacity test* no less than ten *business days* prior to the first day of the testing window.

19.4.12 If a *capacity market participant* fails during a *capacity auction dispatch test* or a *capacity auction capacity test* performed pursuant to section 19.4.11 or section 19.4.11A, respectively, the *capacity market participant* shall be subject to non-performance charges in accordance with the applicable *market manual* and MR Ch.~~apter~~9 s.4.13. Failure during a *capacity auction dispatch test* or a *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s.6.2~~section 6.2 of Chapter 3~~.

19.4.13 The *IESO* shall provide a *capacity market participant* day-ahead notification of a *capacity auction dispatch test* pursuant to section 19.4.11 and the test activation shall occur within the *availability window* of an *obligation period*.

19.4.14 The *capacity auction dispatch test* 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 be entitled to compensation for valid *capacity auction dispatch tests* conducted during a *commitment period* pursuant to this section 19.4 and in accordance with the applicable *market manuals*. The *hourly demand response resource* shall not be entitled to compensation for any costs related to any *capacity auction capacity test.*

19.4.16 The *capacity market participant* shall submit to the *IESO* all of the testing data and other information in accordance with the requirements and deadlines set out in the applicable *market manual*. If the *capacity market participant* fails to submit the entirety of such testing data and other information within such deadlines, the *capacity market participant* is deemed to have delivered zero MWh during the *capacity auction capacity test* or *capacity auction dispatch test*, as the case may be.

19.4.17 The *IESO* shall assess, in accordance with the applicable *market manual,* the testing data and other information submitted by the *capacity market participant* and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

19.4.18 Where the notice referred to in section 19.4.17 indicates that the *hourly demand response resource's* average hourly capacity delivered over the four hour testing

period was less than 90% of its *cleared UCAP* and such *capacity market participant* has not filed a *notice of disagreement* in regards to the outcomes of the *capacity auction capacity test* in accordance with MR Ch.9 s.6.8~~section 6.8 of chapter 9,~~ such *capacity market participant's capacity obligation* for such *hourly demand response resource* shall, effective as of one *business day* following the time period referred to in MR Ch.9 s.6.3.14~~section 6.3.14 of chapter 9,~~ be reduced to the amount of capacity that was determined by the *IESO,* in accordance with the applicable *market manual,* to have been provided by the *capacity market participant* during the *capacity auction capacity test*. If such reduction in the *capacity market participant's capacity obligation* for such *hourly demand response resource* results in such *capacity obligation* being less than one MW, the remainder of the *capacity market participant's capacity obligation* for such *hourly demand response resource* is forfeited effective as of one *business day* following the time period referred to in MR Ch.9 s.6.3.14~~section 6.3.14 of chapter 9.~~

19.4.19 Where the notice referred to in section 19.4.17 indicates that the *hourly demand response resource's* average hourly capacity delivered over the four hour testing period was less than 90% of its *cleared UCAP*, such *capacity market participant* shall be subject to an in-period *cleared UCAP* adjustment charge pursuant to MR Ch.9 s.4.13.8~~ection 4.7J.2.9 of Chapter 9.~~

19.4.20 After the relevant *capacity market participant* has made payment in full of any *settlement amount* owing pursuant to ~~section~~ MR Ch.9 s.4.13.8~~4.7J.2.9 of Chapter 9,~~ in respect of the same *capacity auction capacity test* for which its *capacity obligation* is being reduced pursuant to this section 19.4.16, the *capacity market participant* may request a reassessment of its *capacity prudential support obligation* to reflect its revised *capacity obligation* and the *IESO* shall remit any excess *capacity prudential support*~~prudential support~~.

Activation of Hourly Demand Response Resources leading up to or during an Emergency Operating State

19.4.~~16~~21 A *capacity market participant* satisfying a *capacity obligation* using an *hourly demand response resource* shall be entitled to compensation for an activation leading up to or during an *emergency operating state* pursuant to MR Ch.5 s.~~ection~~ 2.3~~ of Chapter 5~~, and in accordance with the applicable *market manuals*.

19.5 Energy Market Participation for Capacity Dispatchable Load Resources

19.5.1 A *capacity market participant* with a *capacity obligation* participating with a *capacity dispatchable load resource* shall receive an availability payment during the *obligation period*, in accordance with this section and the applicable *market manual*. Availability payments may be offset by non-performance charges in accordance with MR Ch.9 s.~~ection~~ 4.~~7J~~13~~ of Chapter 9~~.

Dispatch of Capacity Dispatchable Load Resources

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

19.5.3 A *capacity dispatchable load resource* shall comply with *IESO dispatch instructions* in accordance with Chapter 7.

19.5.4 The *IESO* may disqualify from future participation in the *capacity auction* any *capacity market participant* that fails to reduce its consumption in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Outage Notification Requirements for Capacity Dispatchable Load Resources

19.5.5 Each *capacity dispatchable load resource* shall comply with the *outage* notification requirements of MR Ch.~~apter~~ 5.

19.5.6 A *capacity dispatchable load resource* shall reduce its *bid* to take into account and reflect the maximum *demand response capacity* that it reasonably expects it can consume in accordance with section 3.5.96.

Capacity Auction Testing for Capacity Dispatchable Load Resources

19.5.7 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity market participant* to perform a *capacity auction dispatch test* for each *resource* up to a maximum of two *capacity auction dispatch tests* per *obligation period*.

19.5.7A The *capacity market participant* shall perform a *capacity auction capacity test* once per *obligation period* for each *capacity dispatchable load resource*, in accordance with the applicable *market manual*. The *capacity auction capacity test* shall occur within a five *business day* testing window determined by the *IESO*. The *IESO* shall provide notification to a *capacity market participant* of the *capacity auction capacity test* no less than ten *business days* prior to the first day of the testing window.

19.5.8 If a *capacity market participant* fails a *capacity auction dispatch test* or a *capacity auction capacity test* performed pursuant to section 19.5.7 or 19.5.7A, the *capacity market participant* shall be subject to non-performance charges in accordance with MR Ch.9 s.4.13~~the applicable *market manual*~~. Failure during *capacity auction dispatch test* or *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s.~~ection~~ 6.2~~ of Chapter 3~~.

19.5.9 The *IESO* shall provide a *capacity dispatchable load resource* day-ahead notification of a *capacity auction dispatch test* and the test activation shall occur within the *availability window* of an *obligation period*.

19.5.10 The *capacity auction dispatch test* shall occur in accordance with the *dispatch instructions* for a *capacity dispatchable load resource* specified in this section 19.5.

19.5.11 The *capacity dispatchable load resource* shall not be entitled to compensation for any costs related to any valid *capacity auction dispatch test* or *capacity auction capacity test* conducted during an *obligation period* pursuant to this section 19.5.

19.5.12 The *capacity market participant* shall submit to the *IESO* all of the testing data and other information in accordance with the requirements and deadlines set out in the applicable *market manual*. If the *capacity market participant* fails to submit the entirety of such testing data and other information within such deadlines, the *capacity market participant* is deemed to have delivered zero MWh during the *capacity auction capacity test*.

19.5.13 The *IESO* shall assess, in accordance with the applicable *market manual,* the testing data and other information submitted by the *capacity market participant* and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

19.6 Eligibility Requirements for Capacity Generation Resources

19.6.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* as a *capacity generation resource*, provided that the *capacity market participant*:

19.6.1.1 demonstrates to the satisfaction of the *IESO* that it can provide the *capacity obligation*, as specified in the applicable *market manual;*

19.6.1.2 is authorized as a *generator;*

19.6.1.3 registers its *generation facilities* as a *generation resource* in accordance with the applicable registration requirements ~~applicable to *generation facilities*~~. The *capacity market participant* shall not modify, vary or amend in any material respect any of the features or specifications of any *facility* without first requesting *IESO* authorization and approval in accordance with the applicable *market manual;*

19.6.1.4 satisfies the *connection assessment* requirements in accordance with MR Ch.4 s.~~ection~~ 6 ~~of Chapter 4~~, if required by the *IESO* in accordance with the applicable *market manual;*

19.6.1.5 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.~~ection~~ 5 ~~of Chapter 2~~.

19.7 Energy Market Participation for Capacity Generation Resources

19.7.1 A *capacity market participant* satisfying its *capacity obligation* with a *capacity generation resource* shall receive an availability payment during the *obligation period*, in accordance with this section and the applicable *market manual*. Availability

payments may be offset by non-performance charges in accordance with MR Ch.9 s.ection 4.7J 13 of Chapter 9.

Dispatch of Resources

19.7.2 The *IESO* shall schedule a *capacity generation resource* in the *energy market,* and issue *dispatch instructions* in accordance with Chapter 7.

19.7.3 A *capacity generation resource* shall comply with *IESO dispatch instructions* in accordance with Chapter 7.

19.7.4 The *IESO* may disqualify from future participation in the *capacity auction* any *capacity market participant* that fails to inject *energy* in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Outage Notification Requirements for Capacity Generation Resources

19.7.5 Each *capacity generation resource* shall comply with the *outage* notification requirements of MR Ch.apter 5.

19.7.6 A *capacity generation resource* shall reduce its *offer* to reflect the maximum capacity that it reasonably expects it can inject in accordance with section 3.5.69.

Capacity Auction Testing for Capacity Generation Resources

19.7.7 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity market participant* to perform a *capacity auction dispatch test* for each *capacity generation resource* up to a maximum of two *capacity auction dispatch tests* per *obligation period*.

19.7.7A The *capacity market participant* shall perform a *capacity auction capacity test* once per *obligation period* for each *capacity generation resource*, in accordance with the applicable *market manual*. The *capacity auction capacity test* shall occur within a five *business day* testing window determined by the *IESO*. The *IESO* shall provide notification to a *capacity market participant* of the *capacity auction capacity test* no less than ten *business* days prior to the first day of the testing window.

19.7.8 If a *capacity market participant* fails a *capacity auction dispatch test* or a *capacity auction capacity test* performed pursuant to section 19.7.7 or 19.7.7A, the *capacity market participant* shall be subject to non-performance charges in accordance with MR Ch.9 s.4.13the applicable *market manual*. Failure during a *capacity auction dispatch test* or *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s.ection 6.2 of Chapter 3.

19.7.9 The *IESO* shall provide a *capacity generation resource* that is not a *non-quick start facilityresource* notification up to one *business day* in advance of athe *capacity auction dispatch test* and the *capacity auction dispatch test* shall occur within the *availability window* of an *obligation period*.

19.7.9A The *IESO* shall provide a *capacity generation resource* that is a *quick start* ~~*facility*~~*resource* notification at least one hour in advance of the *dispatch hour* of the *capacity auction dispatch test* and the *capacity auction dispatch test* shall occur within the *availability window* of an *obligation period*.

19.7.10 The *capacity auction dispatch test* shall occur in accordance with the *dispatch instructions* specified in this section 19.7

19.7.11 The *capacity market participant* shall submit to the *IESO* all of the testing data and other information in accordance with the requirements and deadlines set out in the applicable *market manual*. If the *capacity market participant* fails to submit the entirety of such testing data and other information within such deadlines the *capacity market participant* is deemed to have delivered zero MWh during the *capacity auction capacity test*.

19.7.12 The *IESO* shall assess, in accordance with the applicable *market manual,* the testing data and other information submitted by the *capacity market participant* and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

19.8 Eligibility Requirements for System-Backed Capacity Import Resources

19.8.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* with a *system-backed capacity import resource* provided that the cap*acity market participant:*

19.8.1.1 demonstrates to the satisfaction of the *IESO* that it can provide the *capacity obligation*, as specified in the applicable *market manual*;

19.8.1.2 is authorized as a *market participant* eligible to import *energy;*

19.8.1.3 is registered to use the applicable~~as a~~ *boundary entity* *resource* pursuant to section 2.2.7; and

19.8.1.4 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.~~ection~~ 5B ~~of Chapter 2~~.

19.9 Energy Market Participation for System-Backed Capacity Import Resources

19.9.1 A *capacity market participant* satisfying its *capacity obligation* with a *system-backed capacity import resource* shall receive an availability payment during the *obligation period*, in accordance with this section and the applicable *market manual*. Availability payments may be offset by non-performance charges in accordance with MR Ch.9 s.~~section~~ 4.13~~7J of Chapter 9~~.

Dispatch of System-Backed Capacity Import Resources

19.9.2 The *IESO* shall schedule a *system-backed capacity import resource* in the *energy market,* and issue *dispatch instructions* in accordance with Chapter 7.

19.9.3 A *system-backed capacity import resource* shall comply with *IESO dispatch instructions* in accordance with Chapter 7.

19.9.4 The *IESO* may disqualify from future participation in the *capacity auction* any *capacity market participant* that fails to schedule *energy* with the appropriate *scheduling entity* in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Outage Notification Requirements for System-Backed Capacity Import Resources

19.9.5 A *system-backed capacity import resource* shall reduce or remove its *offer* to reflect the maximum capacity that it reasonably expects it can provide in accordance with section 3.5.96*.*

Capacity Auction Testing for System-Backed Capacity Import Resources

19.9.6 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity market participant* to perform a *capacity auction capacity test* for each *system-backed capacity import resource* up to a maximum of two *capacity auction capacity tests* per *obligation period* to verify that the *cleared ICAP* can be satisfied for a duration specified in the applicable *market manual* by the *system-backed capacity import resource*.

19.9.7 If a *capacity market participant* fails a *capacity auction capacity test* performed pursuant to section 19.9.6, the *capacity market participant* shall be subject to non-performance charges in accordance with MR Ch. Chapter 9 s.4.13 and the applicable *market manual*. Failure during a *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s.ection 6.2 of Chapter 3.

19.9.8 The *IESO* shall provide a *system-backed capacity import resource* notification at least two hours in advance of the *dispatch hour* of the *capacity auction capacity test* and the *capacity auction capacity test* shall occur within the *availability window* of an *obligation period*.

19.9.9 The *capacity auction capacity test* shall occur in accordance with the *dispatch instructions* specified in this section 19.9.

19.9.10 The *IESO* shall assess, in accordance with the applicable *market manual,* the relevant testing and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

19.9A Eligibility Requirements for Generator-Backed Capacity Import Resources

19.9A.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* with a *generator-backed capacity import resource* provided that the *capacity market participant*:

19.9A.1.1 demonstrates to the satisfaction of the *IESO* that it can provide the *capacity obligation*, as specified in the applicable *market manual*;

19.9A.1.2 is authorized as a *market participant* eligible to import *energy* in association with a *boundary entity* resource; *and*

19.9A.1.3 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.ection 5B of Chapter 2.

19.9B Energy Market Participation for Generator-Backed Capacity Import Resources

19.9B.1 A *capacity market participant* satisfying its *capacity obligation* with a *generator-backed capacity import resource* shall receive an availability payment during the *obligation period*, in accordance with this section and the applicable *market manual*. Availability payments may be offset by non-performance charges in accordance with MR Ch.9 s.section 4.7J 13 of Chapter 9.

Dispatch of Generator-Backed Capacity Import Resources

19.9B.2 The *IESO* shall schedule a *generator-backed capacity import resource* in the *energy market,* and issue *dispatch instructions* in accordance with Chapter 7.

19.9B.3 A *generator-backed capacity import resource* shall comply with *IESO dispatch instructions* in accordance with Chapter 7.

19.9B.4 The *IESO* may disqualify from future participation in the *capacity auction* any *capacity market participant* that fails to schedule *energy* with the appropriate scheduling entity in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Outage Notification Requirements for Generator-Backed Capacity Import Resources

19.9B.5 A *generator-backed capacity import resource* shall reduce or remove its *offer* to reflect the maximum capacity that it reasonably expects it can provide in accordance with section 3.5.96.

19.9B.6 A *generator-backed capacity import resource* shall comply with the *outage* notification requirements specified in the applicable *market manual.*

Capacity Auction Testing for Generator-Backed Capacity Import Resources

19.9B.7 A *capacity market participant* satisfying its *capacity obligation* with a *generator-backed capacity import resource* must perform a capacity auction capacity test, per obligation period, in accordance with the applicable *market manual*, by scheduling an *energy* import into the *IESO-administered market* for at least one (1) hour that coincides with the timing of its scheduled four hour activation in the neighbouring *control area*, on a date that falls within the first two months of the applicable *obligation period* and by submitting data to the *IESO* to confirm the capability of the *generator-backed capacity import resource* to inject at least its *cleared ICAP* into the *control area* in which it is located for four consecutive hours within the *availability window.*

19.9B.8 A *capacity market participant* that fails to submit data pursuant to section 19.9B.7 in the form specified by the *IESO,* in a timely manner shall be subject to a capacity obligation administration charge pursuant to MR Ch.9 s.4.13.4~~ection 4.7J.2.3 of Chapter 9~~.

19.9B.9 If a *capacity market participant* fails a *capacity auction capacity test* performed pursuant to section 19.9B.7, the *capacity market participant* shall be subject to non-performance charges in accordance with MR Ch.9 s.4.13~~the applicable *market manual*~~. Failure during a *capacity auction dispatch test* or a *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s.~~ection~~ 6.2 ~~of Chapter 3~~.

19.9B.10 The *capacity auction capacity test* shall occur in accordance with the *dispatch instructions* specified in this section 19.9B.

19.9B.11 The *capacity market participant* shall submit to the *IESO* all of the testing data and other information in accordance with the requirements and deadlines set out in the applicable *market manual*. If the *capacity market participant* fails to submit the entirety of such testing data and other information within such deadlines the *capacity market participant* is deemed to have delivered zero MWh during the *capacity auction capacity test*.

19.9B.12 The *IESO* shall assess, in accordance with the applicable *market manual,* the testing data and other information submitted by the *capacity market participant* and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

19.10 Eligibility Requirements for Capacity Storage Resources

19.10.1 A *capacity market participant* is eligible to satisfy its *capacity obligation* with a *capacity storage resource* provided that the *capacity market participant*:

19.10.1.1 demonstrates to the satisfaction of the *IESO* that it can satisfy the *capacity obligation*, as specified in the applicable *market manual.*

Capacity storage resources must satisfy *capacity obligations* with injections of *energy* into the *IESO-controlled grid*;

19.10.1.2 is a registered *market participant* authorized as an *electricity storage participant* in accordance with the applicable *market manual;*

19.10.1.3 registers its *electricity storage facilities* as an *electricity storage resource* in accordance with the applicable registration requirements ~~applicable to electricity storage facilities~~. The *capacity market participant* shall not modify, vary or amend in any material respect any of the features or specifications of any *facility* without first requesting *IESO* authorization and approval in accordance with the applicable *market manual;*

19.10.1.4 satisfies the *connection assessment* requirements in accordance with MR Ch.4 s.~~ection 6 of Chapter 4~~, if required by the *IESO* in accordance with the applicable *market manual;*

19.10.1.5 has provided *prudential support* and *capacity prudential support* in accordance with MR Ch.2 s.~~ection 5 of Chapter 2~~.

19.11 Energy Market Participation for Capacity Storage Resources

19.11.1 A *capacity market participant* satisfying its *capacity obligation* with a *capacity storage resource* shall receive an availability payment during the *obligation period*, in accordance with this section and the applicable *market manual*. Availability payments may be offset by non-performance charges in accordance with MR Ch.9 s.~~section~~ 4.~~7J~~ 13 ~~of Chapter 9~~.

Dispatch of Capacity Storage Resources

19.11.2 The *IESO* shall schedule a *capacity storage resource* as it would an *electricity storage facility* in the *energy market,* and issue *dispatch instructions* in accordance with Chapter 7.

19.11.3 A *capacity storage resource* shall comply with *IESO dispatch instructions* in accordance with Chapter 7.

19.11.4 The *IESO* may disqualify from future participation in the *capacity auction* any *capacity market participant* that fails to inject *energy* in order to satisfy its *capacity obligation* when called upon in accordance with this section 19.

Outage Notification Requirements for Capacity Storage Resources

19.11.5 Each *capacity storage resource* shall comply with its *outage* notification requirements as outlined in MR Ch.~~apter~~ 5.

19.11.6 A *capacity storage resource* shall reduce its *offer* to reflect the maximum capacity that it reasonably expects it can inject in accordance with section 3.5.96.

19.11.7 The *IESO* may, in accordance with the applicable *market manual*, direct a *capacity market participant* to perform a *capacity auction dispatch test* for each *capacity storage resource* up to a maximum of two *capacity auction dispatch tests* per *obligation period*~~.~~.

19.11.7A The *capacity market participant* shall perform a *capacity auction capacity test* once per *obligation period* for each *capacity storage resource*, in accordance with the applicable *market manual*. The *capacity auction capacity test* shall occur within a five *business day* testing window determined by the *IESO*. The *IESO* shall provide notification to a *capacity market participant* of the *capacity auction capacity test* no less than ~~*ten*~~ten *business days* prior to the first day of the testing window.

19.11.8 If a *capacity market participant* fails a test performed pursuant to section 19.11.7 or 19.11.7A, the *capacity market participant* shall be subject to non-performance charges in accordance MR Ch.9 s.4.13~~with the applicable *market manual*~~. Failure during a *capacity auction dispatch test* or *capacity auction capacity test* shall be considered a breach of the *market rules* and may result in sanctions in accordance with MR Ch.3 s~~ection~~.6.2 ~~of Chapter 3~~.

19.11.9 The *IESO* shall provide a *capacity storage resource* notification at least one hour in advance of the *dispatch hour* of the *capacity auction dispatch test* and the *capacity auction dispatch test* shall occur within the *availability window* of an *obligation period*.

19.11.10 The *capacity auction dispatch test* shall occur in accordance with the *dispatch instructions* specified in this section 19.11.

19.11.11 The *capacity market participant* shall submit to the *IESO* all of the testing data and other information in accordance with the requirements and deadlines set out in the applicable *market manual*. If the *capacity market participant* fails to submit the entirety of such testing data and other information within such deadlines the *capacity market participant* is deemed to have delivered zero MWh during the *capacity auction capacity test*.

19.11.12 The *IESO* shall assess, in accordance with the applicable *market manual,* the testing data and other information submitted by the *capacity market participant* and shall provide notice to the *capacity market participant* of the results of the *capacity auction capacity test.*

20. Capacity Exports in the IESO-Administered Markets

20.1 Capacity Export Request and IESO Review

20.1.1 A *market participant* that wishes to export eligible capacity shall submit a *capacity export request* to the *IESO,* in the form, within the timelines and as further prescribed in the applicable *market manual*.

20.1.2 The *IESO* shall approve or deny *capacity export requests* based on the *IESO's* review, as prescribed in the applicable *market manual.*

20.1.3 The *IESO* may, after approving or partially approving a *capacity export request* and prior to the *market participant* committing capacity to an external *control area*, revoke an approval of a *capacity export request* in order to maintain the *reliability* of the *IESO-controlled grid*, or if the *IESO* becomes aware of any event or change in circumstances that may alter the *IESO's* approval of a *capacity export request*.

20.2 Capacity Export Commitment Process

20.2.1 A *market participant* may only commit capacity to an external *control area* in accordance with the time periods, quantities and other terms and conditions of the *IESO's* approval of the *capacity export request*.

20.2.2 A *market participant* that commits its capacity to an external *control area* shall notify the *IESO* of the commitment and any subsequent changes to the commitment in the time and manner prescribed in the applicable *market manual*.

20.3 Called Capacity Exports

20.3.1 The *IESO* shall only accept and schedule a *called capacity export* in accordance with section 20.4 when advised by the external *control area operator* that the applicable external *control area* is anticipating or experiencing an *adequacy* shortfall, as may be specified in the applicable *capacity export agreement*.

20.3.2 A *market participant* shall notify the *IESO* concerning the details of a *called capacity export* in the time and manner prescribed in the applicable *market manual*.

20.4 Called Capacity Export Scheduling and Dispatch

20.4.1 Export *bids* for *called capacity exports* shall only be submitted by the *registered market participant* for the *resource* that has received approval from the *IESO* to export capacity in accordance with section 20.1.2.

20.4.2~~1~~ All export *bids* for *called capacity exports* shall be submitted in the form and within the timelines prescribed in the applicable *market manual*.

20.4.3~~2~~ Notwithstanding any provision of the *market rules* that may require the *IESO* to restrict exports in order to maintain the *adequacy* of the *IESO-controlled grid*, the

IESO may schedule and *dispatch called capacity exports* in accordance with applicable *capacity export agreements* (the relevant details of which are specified in the applicable *market manual*).

21. Electricity Storage in the IESO-Administered Markets

21.1 Purpose

21.1.1 This section 21 sets out *market rules* intended to facilitate the near-term inclusion of *electricity storage participants* in the *IESO-administered markets* and the connection of *electricity storage resources* to the *electricity system*. A number of the provisions of this section would, based on their subject matter, ordinarily be included under different chapters or sections of the *market rules*. However, these provisions have been gathered together here under a single section for convenience of reference and until such time that *electricity storage participants* and *electricity storage resources* are more fully integrated under these *market rules.*

21.2 Market Registration

21.2.1 An *electricity storage participant* wishing to register an *electricity storage facility* and its associated *self-scheduling electricity storage resources* shall satisfy the applicable requirements in section 2, as further described in the applicable *market manual*.~~:~~ Without limiting the generality of the foregoing, the *electricity storage participant* shall ~~fulfill~~ satisfy those requirements set out in MR Ch.4 App.~~endix~~ 4.24 ~~of Chapter 4~~ (IESO Monitoring Requirements: Electricity Storage Facilities) and MR Ch.4 App.~~endix~~ 4.25 ~~of Chapter 4~~ (Monitoring Requirements: Electricity Storage Performance Standards)".

21.2.2 Subject to the *market rules* governing participation in the *energy markets* and the provision of *ancillary services* to the *IESO,* a *self-scheduling electricity storage resource* or its associated *electricity storage units* may only be registered to ~~to~~ participate in the *energy market* and to provide *reactive support service*, *voltage control service*, or *regulation* service or combinations of the foregoing, except that it shall not be registered to both participate in the *energy market* and provide *regulation* service.

21.2.3 An *electricity storage participant* wishing to register an *electricity storage facility* and its associated *dispatchable electricity storage resources*, shall satisfy the applicable requirements in section 2 as further described in the applicable *market manual*. ~~:~~ Without limiting the generality of the foregoing~~,~~ the *electricity storage participant* shall satisfy ~~fulfill~~ those requirements set out in MR Ch.4 App.~~endix~~ 4.24 ~~of Chapter 4~~ (IESO Monitoring Requirements: Electricity Storage Facilities) and MR Ch.4 App.~~endix~~ 4.25 ~~of Chapter 4~~ (Monitoring Requirements: Electricity Storage Performance Standards).

21.2.4 Subject to the *market rules* governing participation in the *energy markets* and the provision of *ancillary services* to the *IESO,* a *dispatchable electricity storage resource*

may only be registered to allow that *resource* ~~or its associated *electricity storage units*~~ to participate in the *energy market* or *operating reserve market*, or for its associated *electricity storage units* to provide ~~*energy*, *operating reserve,*~~ *reactive support service* or *voltage control service*, or combinations of the foregoing and may participate in the *capacity auction.*

21.3 Provision of Regulation Service

21.3.1 An *electricity storage participant* wishing to provide *regulation* services must register its *electricity storage resource* as further described in the applicable *market manual*.

21.3.2 Notwithstanding section 2.2.9A.1, an *electricity storage participant* may apply to register as a *self-scheduling electricity storage resource* any *electricity storage facility* that has an *electricity storage capacity* greater than 10 MW up to 50 MW in capacity for the purposes of providing *regulation* services only, provided that the *IESO* determines that there are no adverse impacts on the *reliable* operation of the *IESO-controlled grid*;

21.3.3 An *electricity storage resource* that is registered to provide *regulation services* may not participate in the *energy market* or the *operating reserve market*.

21.4 Energy Offers and Energy Bids

21.4.1 Notwithstanding section 3.5.1, an *electricity storage participant* may submit both an *offer* to inject *energy* and a *bid* to withdraw *energy* for a *dispatchable electricity storage resource* during the same *dispatch hour*.

21.4.2 For each *dispatch hour* in which an *electricity storage participant* submits both an *energy offer*~~*s*~~ and *energy bid*~~*s*~~ for an *electricity storage resource* ~~are submitted in accordance with section 21.4.1~~, the *electricity storage participant* shall not submit a ~~ensure that the lowest price of the *offers* submitted~~ *bid* for that *electricity storage resource* that includes a price that is higher ~~to inject *energy* is greater~~ than or equal to the lower of: (i) the lowest price in ~~the highest price of any~~the offer submitted for that ~~*bid* for that same~~ *electricity storage resource*; and (ii) the lowest price in that *electricity storage resource's energy offer reference level value* ~~to withdraw *energy*~~.

21.4.3 An *electricity storage ~~provider~~ participant* who~~se~~:

(a) submits a *bid* in the *day-ahead market* contrary to section 21.4.2, is not entitled to the *day-ahead market* make-whole payment *settlement* amount, determined in accordance with MR Ch.9 s.3.4.1, for the relevant *dispatch hours*; and ~~lowest *offer* price in the *day-ahead market* for an *electricity storage unit* to inject *energy* in any *dispatch hour* is less than or equal to its highest *bid* price in the *day-ahead market* for the same *electricity storage unit* to withdraw *energy* in that same *dispatch hour* is not entitled to the *day-ahead market* make-whole payment *settlement* amount determined in accordance with MR Ch.9 s.3.4.1; and~~

(b) submits a *bid* in the *real-time market* contrary to section 21.4.2, is not entitled to the *real-time* make-whole payment *settlement* amount determined in accordance with MR Ch.9 s.3.5.1, for the relevant *dispatch hours*.~~lowest *offer* price in the *real-time market* for an *electricity storage unit* to inject *energy* in any *dispatch hour* is less than or equal to its highest *bid* price in the *real-time market* for the same *electricity storage unit* to withdraw *energy* in that same *dispatch hour* is not entitled to the *real-time* make-whole payment *settlement* amount determined in accordance with MR Ch.9 s.3.5.1~~

21.5 Revisions to Dispatch Data

21.5.1 ~~Notwithstanding section 3.3.5, t~~The *IESO* shall approve reduced injections or withdrawal amounts included in revised *dispatch data* from *electricity storage participants* submitted within ~~2 hours of a given *dispatch hour*~~the *real-time market mandatory window*, where the *electricity storage participant* determines, acting reasonably that its *electricity storage resource* may reach its:

21.5.1a. *lower energy limit* in that *dispatch hour*, and will likely prevent the *electricity storage resource* from injecting *energy* in accordance with its *offer*; or

21.5.1.b *upper energy limit* in that *dispatch hour*, and will likely prevent the *electricity storage resource* from withdrawing *energy* in accordance with its *bid*.

21.6 Operating Reserve

21.6.1 An *electricity storage participant* shall not submit an *offer* to provide *operating reserve* from a *dispatchable electricity storage resource* in any *dispatch hour* when there is a simultaneous *energy bid* and *energy offer* ~~in the *real-time market*~~ for that *electricity storage resource* in the same *dispatch hour*.

21.6.2 An *electricity storage participant* shall only submit an *offer* to provide *operating reserve* for a *dispatchable electricity storage resource* accompanied by an *offer* to inject *energy* if:

21.6.2.1 The *electricity storage participant* submits an *offer* for the *electricity storage resource* to inject *energy* for the entire *dispatch hour* and has not submitted any *bids* for that *electricity storage resource* to withdraw *energy* for that *dispatch hour*;

21.6.2.2 The *electricity storage participant* does not submit an *offer* to provide *operating reserve* accompanied by a *bid* to withdraw *energy* in the subsequent *dispatch hour*; and

21.6.2.3 the *remaining duration of service* at the time stipulated in the applicable *market manual* is greater than or equal to the period of time stipulated in the applicable *market manual.*

21.6.3 An *electricity storage participant* shall only submit an *offer* to provide *operating reserve* for a *dispatchable electricity storage resource* accompanied by a *bid* to withdraw *energy* if:

21.6.3.1 The *electricity storage participant* submits a *bid* for the *electricity storage resource* to withdraw *energy* for the entire *dispatch hour* and has not submitted any *offers* for that *electricity storage resource* to inject *energy* for that entire *dispatch hour*;

21.6.3.2 The *electricity storage participant* does not submit an *offer* to provide *operating reserve* accompanied by an *offer* to inject *energy* ~~for the *electricity storage resource* to inject energy into the *real-time market* nor an offer to provide *operating reserve*~~ in the subsequent *dispatch hour*; and

21.6.3.3 The *remaining duration of service* at the time stipulated in the applicable *market manual* is greater than or equal to a period of time stipulated in the applicable *market manual.*

21.7 Interpretation

21.7.1 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.

21.7.2 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:

21.7.2a treat electricity storage injecting, or proposing to inject *energy*, as either a *dispatchable generation resource* or *self-scheduling generation resource*; and

21.7.2b treat electricity storage withdrawing, or proposing to withdraw *energy*, as either a *dispatchable load* or *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.

21.7.3 For further certainty, the reference in section 21.~~8~~7.2a to the use of *dispatchable generation resource* or *self-scheduling generation resource* in the interpretation of Chapter 7, System Operations and Physical Markets-Appendices and the applicable *market manuals*, shall not include any features or attributes that pertain primarily to and are distinctive of *intermittent generation resources*, *flexible nuclear generators*, or *variable generators*.

22. Market Power Mitigation

Note – The latest version of the Market Power Mitigation rules based on the most recent December 2023 posting will be included within the Final Alignment batch of market rule amendments.