Stakeholder Feedback and IESO Response

Market Renewal Program: Market and System Operations market rule amendment proposal – Vlad Urukov Written Comments

Market Rule Section Reference	Description
1.32.2 The *IESO* shall administer~~, in accordance with sections 3 to 8,~~ the following ~~*real-time*~~ markets in an integrated fashion: 1.32.2.1 a *day-ahead market* in *energy*, measured in MWh (comprised of *physical transactions* and *virtual transactions*)~~; and~~ 1.32.2.2 a *day-ahead market* in several classes of *operating reserve*, measured in MW~~.~~ (comprised of *physical transactions*); 1.32.2.3 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*).	While I understand the applicability of "integrated fashion" when applied to a real time energy and OR markets (i.e., joint optimization), does this term make sense across Day Ahead AND real-time. These are distinct markets with integrated Energy and OR, but not integrated across all four bullets. Why is OR thought as comprised of "physical transactions". I understand the distinction to "virtual" but perhaps there is more appropriate terminology for reserve, which is a stand by product.

Market Rule Section Reference	Description
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*;	The MMCP is a defined term. I propose the definition is repeated here rather than coming up with new language. The MORP is a defined term. I propose the definition is repeated here rather than coming up with new language. Also, if the "by the IESO board" is a change to MMCP and MORP, propose language is added to Chapter 11 definitions as it exists for "Settlement floor price for energy" Correct ";" to a "." For 1.6.1.4
variable generation means all *energy* that is supplied by a *variable generation resource*; ~~wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid*;~~ *variable generator* means a *generator* whose *generation facility* is classified as *variable generation*;	Can we confirm that variable generation resource is defined. Seems there is a term missing in the latest revision of Ch 11
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*.	These were subject to public consultation. Check if IESO Board is appropriate and/or additional language should be added to describe the process and participant engagement.

Market Rule Section Reference	Description
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.	What is a "lamination volume 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.	Why "for a given dispatch day". Wouldn't the same apply even if it is for a given "hour"? Propose "**during a** given dispatch day" I don't think "administrative pricing" is defined – "administrative price" is
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.	Use defined terms or at least use "calculation engines". Is it issuance or publication? What is an example of such information?
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*;	In case there is an active dispute when the new market is operationalized, what reference levels will the IESO use – should that possibility be recognized in the market rules.

Market Rule Section Reference	Description
2.1.3 Subject to sections ~~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.	I don't understand 2.1.3.3's reference to "in the case of a distribution system" when 2.1.1 refers to "facility embedded within a distribution" system. Propose to correct or clarify. Even if corrected to include "facility embedded within a distribution", confirm the 1MW applies (if its embedded)
start indication value means the minimum quantity of *energy* in MW that a *resource* must be scheduled to determine whether the *generation units* associated with the *resource* have used one or more of the submitted maximum number of starts per day;	"Maximum number of starts per day" is a defined term – italicize.

Market Rule Section Reference	Description
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*; *start indication value* means the minimum quantity of *energy* in MW that a *resource* must be scheduled to determine whether the *generation units* associated with the *resource* have used one or more of the submitted maximum number of starts per day; *maximum number of starts per day* ~~is~~ means the number of times that a ~~unit~~ *resource* can be started within a *dispatch day*;	Change "not exceeding …" to limited to the number of. Current wording suggest the value has to be less then the number of units, which is not the case. Not clear if starts will increment once the schedule is again lower than the number
2.2.6A.3 whether it intends to submit *hourly must run*; 2.2.6A.4 *forebay* and any associated *time lags*.	Add "and" after ";" Clarify if these forbays need to be linked, as the timelag is only a feature of the linked forebay Consider adding specificity in terms of which forebays are referenced here.

Market Rule Section Reference	Description
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* . **2.2A 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. 2.2D.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 resource*~~s~~ for all	What is the reason for removal of "commissioning generation facility" while 2.2A still states "in accordance with section 2.2". Now section 2.2 doesn't have any made mention of commissioning.

Market Rule Section Reference	Description
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*.	Why is the word "associated" deleted? The term resources is not mentioned in the first part of the sentence and therefore the term "those … resources" is unclear – what resources is this referring to?
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: 2.2.20 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.	Could you explain why changing to a DL required 180 days in comparison to the 75 days for any other direction of change on the load side (including from a DL to NDL or PRL) 2.2.20 adds confusion in relation to 2.2.19.2 which gives a 75 day window.
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*.	Where is the "resource specific information" listed (see Deletion of Ch 9). Also, isn't there a further requirement as to what some of the information is to actually contain – see definition requirements.

Market Rule Section Reference	Description
generator offer guarantee eligible resource or *GOG-eligible resource* means a *dispatchable non-quick start resource:* (i) with a registered *elapsed time to dispatch* greater than one hour; (ii) with a registered *minimum loading point* greater than 0 MW; (iii) with a registered *minimum generation block run-time* greater than one hour; and (iv) its primary or secondary fuel source is not uranium.	
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. *self-scheduling generation facility* means a *generation facility* comprised of one or more *generation units* that are each exclusively associated with a *self-scheduling generation resource* ~~located within the *IESO control area* that can operate independently of *dispatch instructions* from the *IESO*~~; *self-scheduling generation resource* means a *generation resource* that can operate independently of *dispatch instructions* from the *IESO*;	Why does 2.2A.2 use the term "generation facilities associated with a self-scheduling generation resource" while applied to "commissioning generation facility" rather than the term "self-scheduling generation facility", which is already defined based on a "self-scheduling generation resource"

Market Rule Section Reference	Description
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.	Why does 2.2.A.3 refer to participation in the day ahead or real time markets, whereas 2.2.A.1 refers to participation in only the real time market.
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:	3.1.12 and 3.1.13 refer to instances when an ADE is not established, meaning its not set whereas 3.1.13 speaks to an increase presumably from a set value. Seems like 3.1.14 need to be amended to reflect an approval of something more than an increase to cover section 3.1.12/13

Market Rule Section Reference	Description
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.	Are "day-ahead market submission window", "day ahead market restricted window" and "standing dispatch data" defined terms?
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.	In what case will the IESO use 3.2.6 (most recent dispatch data) in the context of 3.2.4 which states the IESO will approve submission within a window. Is this saying that if the IESO DOES NOT approve as per 3.2.4, the IESO WILL then use the data submitted before 10:00 EPT on the day prior? It is not very clear with the current wording Is EPT deliberate, where EST is used elsewhere?
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*.	In IESO's response to OPG comment on 3.2.5, the IESO indicated that the language should not only reflect IESO's inability to "receive dispatch data", but also a participant's ability to "send information". The current language does not reflect this dual mode of failure and should be updated.
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*.	"on a resource" or "for a resource"? What is the difference between a revision to dispatch data and revised dispatch data. What is the significance/intent of this section?

Market Rule Section Reference	Description
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;	Change ";" to ":"
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*.	What is the significance of the reference to market manual? In what circumstance will the MM allow for a revised ADE?
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.	Is the intent of this statement that a GOG-eligible resource scheduled in DA can not increase SNL and can not increase the prices for quantities up to MLP from the last DA offer price? If so, suggest clarifying as "above the latest offer price corresponding to this quantity"
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.*	Explain rationale for not changing offers for hours when a resource has NOT received a commitment?

Market Rule Section Reference	Description
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*:	Why is the term "latest offer" used in 3.3.3.7 and "its energy offer prices" in 3.3.3.8
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*.	Explain what does "b" require? An example would be useful
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*.	a) relates to time and b) to a quantity explain how a and b are applied with an example

Market Rule Section Reference	Description
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	Assuming these are "and" conditions, apply same nomenclature as elsewhere using "; and"
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.*	Can the resources be a part of a different facility? If so, what is the definition of "without delay". Does this relate to a shared forebay definition?

Market Rule Section Reference	Description
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:	What "quantity" is being referenced in relation to "poses risk"?
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*.	Explain the last sentence in regards to referring changes to the MSP. What criteria will the IESO use? Is this applicable only to section 3.3.5
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;	Change ";" with "." For c)
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.*	What is "certain daily dispatch data" referring to and what is the applicable market manual?

Market Rule Section Reference	Description
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*.	Is this applicable to (iv) or to 3.3.8 Consider rewriting as a separate section Clarify what is "change in quantity" and under what circumstances. Why is the MSP flagged here given that this section is titled "obligation to Revise Dispatch Data"
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*.	What is referred to here as "the appropriate"?
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*.	What is referred to by "dispose of excess energy"
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.	Clarify that it is not the sum of the submissions, but rather the sum of all MHOs for each hour in a given day

Market Rule Section Reference	Description
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*.	Reword "expects to be necessary" in terms of what is expected to be necessary
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;	Are there any defined terms in 3.5.22.6? Replace ";" with "." In 3.5.22.7
3.5.22.7 *Thermal state* in accordance with section 3.5.35; 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*.	There is no further explanation as to what is expected from a thermal state submission in 3.5.35 Are both of these needed?
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:	Why was "for each class of OR" deleted? There are 2-5 PQ pairs for each class – see 3.6.1
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*.	Clarify "by a corresponding". There can be up to 20 energy offers and 5 OR offers. Consider rewording for clarity
	Proposes to inject "energy" ?

Market Rule Section Reference	Description
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.*	Where are the extra requirments re 10N and 30R as per below flagged 5. If required, enter your **Reserve Load Point** for the applicable hour(s). The Reserve Loading Point specifies the minimum generation level in megawatts at which the generator can provide its maximum operating reserve of the class of OR it is offering. This information allows the IESO to simultaneously schedule energy and operating reserve for the generator. **Market Participant** / **Reserve Load Point Options** Generator: • This field must be greater than 0 when offering 10-minute spinning OR. • This field must be set to 0.0 when offering 10-minute non-spinning OR. • This field can be left empty or set to 0.0 when offering 30-minute spinning OR. Load, Importer, Exporter: This field can be left empty or set to 0.0 
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.*	Isn't the submission of the RLP in itself sufficient to govern the DSO. It may be hard for participants to track this. In other words, why submit an RLP if the participant then is expected only to offer if RLP is not an issue?
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.*	Is it practicale for participants to remove OR offers based on a PD energy run, as subsequent runs the energy schedule may be above RLP. In essense same point as above, isn't the RLP there to help participant not needing to micromanage offers?

Market Rule Section Reference	Description
3.912.2 Each *transmitter* referred to in section 3.912.1 shall update the information described in Appendix 7.4 so that it is current at: 3.912.2.1 15:00 EST on the day which is two days prior to the relevant *dispatch day*; 3.912.2.2 05:00 EST on the ~~*pre-*~~day prior to the relevant *dispatch day*; 3.912.2.3 10:00 ~~EST~~EPT on the ~~*pre-*~~day prior to the relevant *dispatch day*; and 3.912.2.4 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.	Is the use of EST/EPT particulary for 2.2 and 2.3 deliberate?
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;	I don't see "intertie meter" as a defined term, only "intertie metering point". Connected is not a defined term, "connect" is.
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	"may" vs "will". In what circumstances will the IESO use this, particularly given the recent issue in this regard?
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.*	Propose "that represents" instead of "to represent"

Market Rule Section Reference	Description
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.	"reliable" is not a defined term. Should it be "contingency event" (not "events" plural) which is defined as a failure of single or multiple components? What practice is referred to by the statement "IESO's commitment to neighbouring trnamission systems for regulation"?
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.	Why is "demand forecast" not inlcuded in "forecast data" in 3A.1.7?
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.	"DAM calculation engine" is not a defined term, although day-ahead market and DAM are both defined. Would be less confusing if only one is used. IESO's feedback stated that notification will take the form of "DAM notification" on IESO's website as per MM4.1. S7.2. Suggest language

Market Rule Section Reference	Description
4.4.1 The *IESO* shall administer the *day-ahead market calculation engine* in accordance with Appendix 7.5.	reflects means of notification or at a minimum states "in accordance with the MM"
4.7.2.2 the forecast of expected total system load, total system losses, available *energy*, and *operating reserve* requirements for the forecast period;	What is the "forecast period" in this context? Is it a longer period than the "for the next dispatch day"? If not, consider removing or clarifying
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*.	Can you provide an example of how these prices will be published.
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*.	Can you provide an example of how the "summary of hours related to global market power" will be published.
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*:	"Publish" is a defined term but "issue" is not. I assume the distinction relates to publishing broadly vs. providing specifically on a participant basis. Consider defining "issue" for consistency
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.	Could you provide an example of the information that will be provided

Market Rule Section Reference	Description
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.	What is the definition of "materially incorrect"? This is confusing as PD will be issued every hour. Clarify what is meant here in reference to "the previous PD schedule"?
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*.	Consider adding specificity related to these being locational prices, and/or Ontario zonal price etc…
5.8.2.13 the actual and forecast number of starts.	What is the difference between "actual" and "forecast" in the context of PD
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.	Consider adding "as per …" in order to point to the part of the MR where this expansion request
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.	"two minutes before" seems very precise. Consider making a more flexible statement.
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*.	6.2.1.3 is missing the "action" i.e., shall be set etc… as it is a distinct entry from 6.2.1.2

Market Rule Section Reference	Description
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*.	What is meant by "the total energy and operating reserve in real time schedules"?
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*:	Clarify with an example. This indicates a single set for 12 intervals rather than 12 runs. What is the exact application
6.6.2.4 total *operating reserve* scheduled, and total *energy* from such *operating reserve*, by area.	What is meant by "total energy from such operating reserve"?
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*.	I don't think "trading date" is a defined term, "trading day" is.
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*.	Can you elaborate on what this is. Will this be given on a participant resolution? What is the definition of "significant". What is meant to "result of the real-time calculation". Can you provide an example and discuss the frequency being at least once a month. What happens if there are no such instances in a given month?
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*.	What is meant by "for each dispatch interval"? Clarify that each 5 minutes will issue data for one interval at a time, rather than balance of intervals for the entire hour How often will "the schedule to provide contracted ancillary services" be issued

Market Rule Section Reference	Description
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 services*.	What "ancillary services" are included in 6.7.3.2?
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*.	Propose to add "issued a release notification for that resource" as at a participant level there may be multiple release notifications for other resources.
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.	Why was "best effort" notionall lowered to "reasonable effort"? Does the IESO expect a different level of ability to provide these advisories? If not, best effort should remain as the goal.
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*.	Same as above, "best effort" should be the aspirational standard. Also is "cosistent with" well defined? "Closely approximate" is more clear.

Market Rule Section Reference	Description
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	"Failure of a resource to follow dispatch" is a very low bar to have the IESO not comply with 7.2.1. Propose language is added to qualify the subset of instances where not following dispatch by one resource would cause the IESO to not comply with 7.2.1
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~~.	Same comment re "reasonable" vs "best effort"
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.	The original language stated that the IESO may issue instructions that depart from the pre-dispatch schedule. The new language states that the IESO doesn't have to issue instrucitons altoghether. That is a material difference and I don't understand why the IESO woulnd't issue ANY instruction if, for example, a resource fails to follw dispatch instructions (7.2.5A.3) Consider reinstating original language. Aso clarify that this section applies only to "a boundary resource"

Market Rule Section Reference	Description
7.2.5A.6 the *interchange schedule* violates the net *interchange schedule* limit.	Isn't NISL violation respected in the calc engine? A bit surpirsed that a schedule would violate it in the first place.
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*.	7.1.1A captures dispatchable loads and as such section 7.3.1.2 is not accurate in terms of its reference to "additional energy production". See 7.4.2 Also consider rewording 7.3.1.3 replacing "same" with a more descriptive language.
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	Confirm boundary enetiry receive a ramp rate indication as described here.

Market Rule Section Reference	Description
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~~. 7.4.6 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.~~	Please comment on how 7.4.2.1 and 7.4.6 are related ensuring that there isn't overall over-collection as both of these items are reductions to revenues under the same condgition.
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.	Currently there are two documents that speak to compliance with dispatch – an Interpretation Bulletin and a Statement of Approach. It will be much better if the IESO issues one, clear document outlining expectations and means of assessment (data source, meter type etc)

Market Rule Section Reference	Description
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.	Applying language at the resource level, takes us further from the compliance aggregation model that allows for resources to meet dispatch at an aggregate level. Please comment on how compliance aggregation is contemplated here.
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.	Is the appropriate unit of application the resource or the facility?
~~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:~~	Is publicaiton of data adressed in another section?
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.	Should state "determine **and issue**" if "issue" is a term covering instanses when IESO shares confidential information with a market participant (see prior note).

Market Rule Section Reference	Description
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	It is unclear what priority would be used by the IESO to use one of more of these ways of Determining administered prices. It is also unclear why there are so many options. Will locational prices be consistent with the source as to how they were derived. Or different approached can be applied to each location? How can participants validate the approach used?
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*.~~	The IESO should add language in terms of determining and issuing Economic Operating Point and any other relevant information in accordance with a specified timeline (reference to 6 BD in 8.3.1)
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.	Is the IESO expecting contracted ancillary services to be provided at a resource level (rather than a facility)?

Market Rule Section Reference	Description
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.	Why are DA MWPs included in the "not entitled" provision given that the reduction of active power is a real time phenomenon? Also what if the reduciton is only partially causing the MWPs (as in there are other reasosn why the MWP is being received). Suggest this laguage is updated to reflect only the MPWs that is associated with the event.
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.	It is unclear what constitutes a type of "failure to follow dispatch" in terms of materiality that would warrant the IESO to not issue a start up notice. Same comment was made previosuly in terms of clarity in regards to what constitutes singificant instance of not following dispatch.
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*~~s~~; or	I can't tell if the 's' has been inadvertantly deleted?

Market Rule Section Reference	Description
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	Could the IESO confirm that the use of different ways to specify the relevant resource (GOG-eligible vs Dispatchalbe Gen that is a non quick stat and not Nuclear) is intentional. An example would be useful.
10 MW; 11.1.2.2(b) *intermittent generators*, any *generators* classified as *minor generation facilities* or as *small generation facilities*;	"Intermittend generators" should be its own category and "any generator…." a new item Split into 11.1.2.2 and 11.1.2.3
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*,	"embedding facility" is not a defined term. Consider defining it for clarity.
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.~~	Please confirm that with the deletion of the two hour reference, a quick start resourse would have NO obligation to notify the IESO as long as it received an instruction. Please describe how this will work from a timing perspective. If the first instruction is received at the top of the hour for example, the applicable resource may need to have already synchronized. Again, questioning the timing aspect of having the have achnowledged an instruciton as a pre-condition to synchronize.

Market Rule Section Reference	Description
	Also in the context of "synchronize …. to … embedding facility", is the notion of dispatch instruction (which indicates dispatchability) appropriate in the context of "embedded gen", which doesn't receive a dispatch?
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	What is a "proposed synchronization plan"? Please expland on the significance of the plan and as to what that encompasses.
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~~inge~~ 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*.	How is "receit of the notification" established? Could you cross-reference the "any applicable provisions … relating to over-generation dispatch". It is important for generators to have a clear understanding as to when the IESO may require de-synch
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*.	Should there be a corresponding section in the precedding section that specifies that a resource may request approval that will be conditional on 11.2.4A. This section speaks to an ability but it is unclear under what circumstances a participant may ask for such approval in the first place.

Market Rule Section Reference	Description
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.	Whereas the synchornizaiton plan was limited to "non-quick start resources", this section applies to all generators. Can you clarify how this applies to "quick-start", preticualrly given the condition that getting an instruciton is sufficient to synchronize. Is there a synchronizaiton plan specific to a "quick start" resource? If not consider, revising and limiting to "non-quick start"
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. *generator offer guarantee eligible resource* or *GOG-eligible resource* means a *dispatchable non-quick start resource:* (i) with a registered *elapsed time to dispatch* greater than one hour; (ii) with a registered *minimum loading point* greater than 0 MW; (iii) with a registered *minimum generation block run-time* greater than one hour; and (iv) its primary or secondary fuel source is not uranium.	Based on the definition of GOG-eligible resource, does it make sense to incldue " …. or embedding facility"? Is there a significance of the pluralziaiton of "dispatch instructions" – does a resource have to receive at least two such instructions? Consider providing an example.

Market Rule Section Reference	Description
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*.~~	Deleted language specified "at least one hour", whereas new language is "one hour". Calrify if "at least one hour" still applies and if not, what is the flexibility that must exsit as participatns won't be able to notficy exactly one hour in advance.
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.	Please clarify how this process will work for "quick start" resources. If the resource needs to notify five minutes in advance (see 11.3.1) and the IESO has 5 minutes to accept, then there is an obvious possibility that there will be lack of clarity by the time the resource needs to take action. Or, is 11.3.4 specific to non-quick start as it speaks to a "plan". See comment on needing to define what such plan is. If the latter consider, limiting to the relevant 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.	How does this work for "quick start" resources, given the 5 minute window? See comment above.

Market Rule Section Reference	Description
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*.	There is a material difference between "de-synchronize" and "to not synchronize" Isn't the IESO's ability to requrest desynch for reliability already captured in other sections? Isn't the "to not synchize" covered in the above sections which give the IESO the right to reject approval in all possible cases? As per above, I do not think this section is required unless it introduces a new case – please explain.
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:	What is the definition of "energy capability of generation resource". Is this different than the "genertor capability" report which is an after the fact report?
~~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;*	What is the significance of the use of EPT in a. on days prior and EST in d. ? Is the ";", supposed to be a ","?

Market Rule Section Reference	Description
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*;	What is the significance of "or an advisory of the total MW of energy being directed to submit…." Seems there would be duplication of advisory notices – is that intentional?
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; 12.2.2.1 solicit and accept additional or revised *bids* ~~from *dispatchable loads* and *electricity storage facilities*~~ that will reduce ~~load~~*demand* in *response* to higher prices; *response* has the meaning ascribed thereto in section 2.5.4 of Chapter 3;	Inconsistency of "to increase demand" as compared to "that will reduce demand". Recommending to align. Also I don't think the definition of "response" (italization of defined term) is what is captured in the Chapter 3 definition which is the basis of the defined term. Remove italisization
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*.	Consider changing "implement" to "enact" or "execute"
13.5.1 While a suspension of *market operations* is in effect, the *IESO* shall: 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*.~~	I don't see "market operations" as a defined term in Ch 11. Therefore the deletion in 13.1.1 is innapropriate as it leaves the term undefined.

Market Rule Section Reference	Description
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.	Given the locational nature of the prices, will the IESO also validate revenue sufficiency as it relates to instances when these prices are not sufficient to cover participant costs at a locational level. (see comment re: locational nature of administered prices)
19.9A.1.2 is authorized as a *market participant* eligible to import *energy* in association with a *boundary entity* *resource*; *and*	Correct font size
21.4.2 For each *dispatch hour* in which an *electricity storage participant* submits both an *energy offers* and *energy bids* 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*~~.	Italisize "offer" in i) Could you clarify if non complinace with 21.4.2 will result in further action than the forgoing of DA and RT MWPs described in 21.4.3