Feedback Form

Market Renewal Batch 2: Market Power Mitigation

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Chapter 3 Changes

Draft Market Rule / Section Feedback

OPG has comments on the proposed changes to Chapter 3 at this time.

Chapter 7 Changes

Draft Market Rule / Section	Feedback
22.1	OPG has no comments at this time.
22.2	OPG has no comments at this time.
22.3	22.3.1.1-22.3.1.2 : OPG suggests the term "ramp rate" be italicized in the terms " <i>energy</i> ramp rate <i>reference level</i> " and " <i>operating reserve</i> ramp rate <i>reference level</i> ". Without italics, the language is inconsistent with the fact that similar terms, such as " <i>energy offer reference level</i> " and " <i>operating reserve offer reference level</i> " are defined terms.
	22.3.2 : The default values listed in this section may not drive appropriate incentives for participants. For example, the default value for ramp rates is 0.1 MW/min. In the MPM framework, a resource's submitted ramp rate will be rejected if it is 50% below the registered reference level. If the default rate is 0.1 MW/min a participant is incentivized to receive the default value. Similar arguments could be made for Lead Time, MGBRT, MGBDT, MLP, ramp hours to minimum loading point, minimum energy per ramp hour, and maximum energy per ramp hour. The default values are all the most permissive possible value of each parameter.
	IESO indicated in stakeholder sessions that the default values are intended to provide flexibility to the IESO control room. OPG suggests that this intention is unclear as written.
	22.3.2.10 : The section provides the default value for maximum <i>energy per ramp hour reference level</i> as "MWh multiplied by the resource's <i>minimum loading point reference level</i> ". Which MWh value does this refer to? As written, the clause is incomplete.

22.4	22.4.3 : This section does not align with the Detailed Design. Section 3.13.1.2 (second paragraph under "Dual-Fuel Resource Treatment") states that "For dual-fuel resources that have provided their primary and secondary fuel types during the Facility Registration process, the IESO will establish two or more sets of reference levels"
	This design element is critical for resources that can operate according to more than two distinct cost profiles. As an example, a resource may have the ability to operate to fuel a portion of its output via fuel A, and another portion via fuel B. In this situation, neither the "lower cost" or "higher cost" reference level profile contemplated by section 22.4 are appropriate. Additional market rule provisions are necessary to accommodate units that operate in this regime, but at the very least, 22.4.3 should be amended to align with the Detailed Design.

General: If the IESO changes the reference levels of a resource pursuant to any of the provisions in 22.5 or 22.7, the IESO should be required to notify market participants of the change, provide rationale, and allow the participant the opportunity to submit additional documentation. The process as stated gives the participant no notice or recourse to an IESO decision to change a reference level.

22.5.2: The section states that the new reference levels are active from "a date specified by the IESO." A sufficient timeline should be specified in this section to allow MPs time to review the changes, identify any errors, and produce additional documentation to defend the existing reference level.

22.5.3: OPG would like to highlight a similar scenario that should also be contemplated by the Market Rules or Market Manuals. If a synchronized resource's minimum generation block **down** time (MGBDT) extends into the next dispatch day, but the resource's DAM schedule for the next dispatch day begins before the end of the MGBDT, the market participant may choose to offer the resource at a low price to ensure it remains online during the period between its commitment in the current dispatch day and the next.

For example, consider a resource that has a 4-hour MGBDT, with a DAM commitment ending at 22:00, and a next day DAM schedule beginning at 01:00. By using low offer prices to ensure the resource stays on line during HE23-HE1, the resource can avoid potential real time balancing charges in HE2 (if the resource had de-synched at 22:00, its MGBDT would extend to 2:00). This causes the resource to incur additional energy and speed-no-load charges during the "bridge" period (e.g., between 22:00 and 01:00) that it cannot recover through offers without risking de-commitment. Such costs should be accepted as part of the Day Ahead Market start-up reference level in HE2.

22.5.6: Please clarify whether the "higher cost profile" referred to in this section contains only reference prices or also non-financial parameters and reference quantities. A resource could have different operating characteristics for different fuel types, and should be able to register non-financial reference levels and reference quantities for each fuel type.

22.5.6: The "form and content" of documentation accepted by the IESO should be subject to change at any time if the MP and the IESO agree to such a change. As written the only opportunity to set the "form and content" of the documentation is at the time of reference level registration.

22.5.10.3: The section states that if the IESO is not satisfied with a participant's submission with a request for use of a higher reference level, the IESO may:

	"reject subsequent requests made outside of 8:00 to 16:00 EDT for 30 days following the dispatch day that was the subject of the initial request without reviewing such subsequent requests"Please explain the rationale for this rule. OPG feels that exercise of this
	Please explain the rationale for this rule. OPG feels that exercise of this
	power risks denying legitimate requests. If a legitimate request is refused due to the IESO's exercise of 22.5.10.3, the resource may be required to operate at a loss on the higher cost fuel.
	The rule should also specify which subsequent requests will be refused. Would the IESO refuse subsequent requests only for the specific resource, facility, market participant, or market control entity?
	22.5.11 : Participants should have five business days to produce the requested documentation. MM 14.2 s.5.5 allows the IESO five business days to review submitted supporting documentation. The more generous timeline afforded to the IESO should be provided to MPs.
22.6 Reference Quantities	22.6.5: OPG suggests the following revision to this section:
	"A market participant may request that the IESO modify a methodology used to calculate reference quantities for a resource registered under that market participant if the market participant believes that the IESO's methodology reference quantity will over-estimate the quantity of energy or operating reserve that the resource can provide. Any request to do so must be accompanied by additional data and supporting documentation, as set out in the applicable market manual."
	The definition of " <i>reference quantity</i> " is "an <i>IESO</i> -determined formula to calculate a <i>reference quantity value</i> ." Since the reference quantity is a formula, the phrase "methodology used to calculate reference quantities" is redundant.
	22.6.7.2 : This section refers to "maximum installed capacity". The term should either be defined in Chapter 11 or replaced with a term already defined.
22.7	OPG has no comments at this time.

n	Feedback

22.10	OPG has no comments at this time.
	22.9.3: The word "the" should not be italicized: "A <i>market participant</i> shall designate <i>market control entities</i> and thethe market control entity for physical withholding for a resource in accordance with the applicable <i>market manual</i> ."
22.9 Market Control Entities	General: OPG suggests that the definition of Market Control Entity for Physical Withholding should contemplate the ability of a parent entity to direct the offer behavior of a given subsidiary market participant. Where a parent entity meets the criteria in 22.9, but is unable to direct or influence the subsidiary market participant's offer behaviour (due to license provisions or otherwise), that parent entity should not be included in the Market Control Entity for Physical Withholding definition. The parent entity should not be declared a "Market Control Entity" of the subsidiary. It does not control the subsidiary and does not have visibility into its offers.
	22.8.11 : The IESO should provide MPs with an estimate of the cost of the consultant prior to requiring the MP to commit to the Independent Review Process.
	Section 22.8.9 suggests that the IESO would register all reference levels according to the preliminary view. The IESO should instead register reference levels based on the approved findings of the consultant, and only revert to the preliminary views for any findings that were rejected. As written, the rule implies that the IESO would discard all findings from the independent consultant. The rule should be revised to allow the MP and IESO to register a portion of the findings from a consultant.
	An MP appeals to the Independent Review Process for assessment of multiple reference levels. Upon receiving the independent consultant's report, the IESO identifies a factual error in the calculation of one reference level. The IESO and the MP agree to all other findings. At this time, the participant requests the independent review process be discontinued.
	22.8.9: Please clarify the following scenario:
	Finally, MPs should have the opportunity to approve or disapprove of the IESO's selection of consultant for the process.
	In addition to the defined term, OPG suggests the following revision "an <i>independent consultant</i> to independently review a <i>reference level</i> or <i>reference quantity</i> "
22.8 Independent Review Process	22.8.2 : OPG proposes the inclusion of a new defined term <i>independent consultant</i> to specify that consultants engaged according to 22.8 are an independent third party and "arms length" from the IESO and MP. As written, the process by which consultants are chosen by the IESO is unclear.

22.11 Global Market Power Reference Intertie Zones	OPG has no comments at this time.
22.12 Uncompetitive Intertie Zones	22.12.3: The section states that when an intertie is designated uncompetitive, a change to an intertie's designation status takes effect no earlier than two calendar days following publication, whereas 22.12.3 states that a change of status regarding global market power reference intertie zones will occur no earlier than five business days following publication. Please explain the rationale for different timelines for these designations.
22.13	General: OPG feels the IESO's wording of thresholds is indirect. As an example, the phrase "greater than 100% above" might be more easily understood if written as "more than double" or "greater than two times." While this suggestion is editorial, OPG feels it would lead to a clearer reading of the Market Rules overall.
22.14	OPG has no comment at this time.

22.15 Ex-Post Mitigation of Physical Withholding **General:** In general, test thresholds should be regularly assessed for appropriateness. As the IESO mentioned in past stakeholdering engagements, thresholds are based on a number of factors, including market conditions and surveys of the values chosen by other system operators. Subject to regular reporting and consultation with MPs, the Market Rules should be flexible enough to accommodate updated values without requiring an amendment. OPG suggests that the values in the draft rules be identified as defaults, with provisions to assess and adjust on a regular basis. As a specific example, natural gas prices can rise quickly, causing overall market prices to increase substantially. Such a rapid change should be accompanied by a change to the \$25/MWh "no-look" threshold to reflect market conditions.

22.15.3.6: This section references Appendix 7.1A and Appendix 7.2A. Drafts of these appendices have not been released by the IESO. The IESO should notify participants when the appendices become available and allow time to review in conjunction with 22.15.3.6.

22.15.4: The section contains a typo. The following correction should be made:

"The *IESO* may apply a conduct test for *physical withholding* to an *energy offer* of a *registered market participant* for a *resource* that meets the requirements set out in..."

22.15.4: The subsections 22.15.4.1.1-2 and 22.15.4.2.1-2 contain the clause "...that *registered market participant* for **a** *resource*..." As written, it is unclear which resource the conduct tests is applied to. The energy offer should only fail the conduct test if the conditions in 22.15.4 are met by the same resource that also met one of the conditions in 22.15.3.3-6. OPG expects this is the IESO's intent. Clearer wording would be "...that *register market participant* for **the** resource..."

22.15.4.1.2: The condition in this section is met if the aggregate energy offers submitted by resources under the same *Market Control Entity for Physical Withholding* were 5 MW less than the aggregate reference quantity. OPG feels this threshold is impractical for entities with a large "aggregate reference quantity". For example, if the aggregate reference quantity for a Market Control Entity for Physical Withholding is 1000 MW, 5 MW represents a deviation of 0.5%. Given the fact that such an entity would likely be managing many different resources, it is highly likely that they would frequently trigger this condition. OPG suggests that the threshold be chosen similar to 22.15.4.2.2 (5% or 200 MW).

22.15.12: At present, if a resource becomes unavailable to provide energy due to safety, environmental or applicable law (SEAL) constraints, it can submit a forced outage or de-rate slip to the market. Based on MM 14.2 section 9, this slip would reduce the energy reference quantity of the resource. In other instances, SEAL constraints may limit a resources ability to provide OR, but not affect its ability to respond to energy dispatches. OPG argues that such a scenario should reduce the OR reference quantity, otherwise participants risk mitigation for physical withholding. There is currently no means by which MPs can identify via an outage slip that OR is unavailable. In previous stakeholder engagements participants advised the IESO that some method of identifying unavailability of Operating Reserve would be necessary, and the IESO expressed openness to the use of "ancillary service out of service" (ASPOOS) slips. OPG suggests that this issue is still outstanding and should be addressed in the MM as well as this section 22.15.12.

22.15.25: Please clarify the actions available to the MP if the IESO issues a second notice of physical withholding pursuant to 22.15.25. MPs should have recourse to the Notice of Disagreement process if they disagree with the IESO's findings. Ideally, this right should be specified in section 22.15.

22.16 Intertie Reference Levels **22.16.2:** The section states that two different sets of *intertie reference levels* are produced (one for business days and one for all other times). Please explain how the calculations will differ between the two sets of *intertie reference levels*. OPG also suggests that *intertie reference levels* should have an hourly granularity as market dynamics change over the course of a given day.

22.16.4: OPG interprets this section to state that if a market participant does not meet the conditions in 22.16.3, the *DAM energy offer intertie reference level* will be equal to the *intertie border price* for *energy* from the *DAM*. Since *intertie border prices* for *energy* from the *DAM* are not available until after the close of the DAM, participants will not be able to view their intertie reference levels at the time of offer submission. This may lead to more frequent failures of the conduct test, since participants will have no means to ensure their offers fall within the conduct test thresholds. Similar reasoning applies to sections 22.16.7, 22.16.10, 22.16.13, 22.16.16, and 22.16.19.

22.16.5: Please confirm which energy offers would be considered in the "unweighted average of the price contained in all *energy offers* submitted by that market participant". Section 3.10.1.1 of the Detailed Design for MPM states that the calculation would be based on offers submitted "recently". More specific timelines should be identified in the Market Rules. Similar reasoning applies to sections 22.16.8, 22.16.11, 22.16.14, 22.16.17, and 22.16.20.

22.16.6: Section 22.16.6.3 is mislabelled as "22.16.3.3".

22.16.9: the section refers to Energy Bids and states:

"When determining DAM energy bid intertie reference levels for a market participant for a boundary entity resource, the IESO shall consider all the dispatch hours in the 90 days prior to the dispatch day when:
22.16.9.1 the market participant had at least 1 MW in at least 1 dispatch hour scheduled at the boundary entity resource in the day-ahead schedule, excluding any dispatch hours where the IESO manually set the schedule for the market participant for that boundary entity resource;
...and
22.16.9.3 the market participant's energy bid for the boundary entity resource was priced below or equal to the intertie border price."
Outside of operations constrained on for reliability, it is impossible for an export bid to meet both of the criteria in 22.16.9.1 and 22.16.9.3. In order to be scheduled for "at least 1 MW", an export bid must be priced above the

	intertie border price. OPG suggests removing section 22.16.9.3. Similarly, section 22.16.12.3 should be removed.
22.17 Intertie Economic Withholding on an Uncompetitive Intertie	22.17.6 : The defined term "intertie zone" should be italicized as follows:
	The <i>IESO</i> may apply an impact test for <i>intertie economic withholding</i> in an uncompetitive <i>intertie zone</i> to any <i>boundary entity resource</i> that fails the conduct test applied pursuant to section 22.17.3."
	22.17.7 : The conditions for the DAM and real-time market in this section are different. For consistency, OPG proposes the following change:
	An energy offer or energy bid submitted by a registered market participant for a boundary entity resource shall fail the impact test if the boundary entity resource's simulated as-offered energy LMP is the lesser of 100% or \$50/MWh above the simulated intertie reference level energy LMP in the DAM or the lesser of 100% or \$50/MW above the simulated intertie reference level energy LMP in the real-time market.
	22.17.6-22.17.8 : The section does not outline the IESO's course of action should a participant fail the impact test. If the IESO intends to levy a settlement charge against the participant, OPG suggests the following language, similar to what appears in 22.17.15:
	"If a <i>boundary entity resource</i> fails the impact test applied pursuant section 22.17.6, the <i>IESO</i> may apply a <i>settlement</i> charge for each <i>instance of intertie economic withholding</i> in accordance with the applicable <i>market manual.</i> "
22.18 Mitigation for Make-Whole Payment Impact on Uncompetitive Interties	OPG has no comments at this time.
22.19	OPG has no comments at this time.
Appendix 7.6	OPG has no comments at this time.

Chapter 11 Definitions Changes

Global market power reference intertie zone	OPG suggests that a more direct definition of <i>global market power reference intertie zone</i> should be included in Chapter 11. The current definition is implicit, relying on careful reading of Chapter 7 Section 22.11 and applicable market manuals. These sections make use of the defined terms in their exposition, leading to an unclear reading.
Market Control Entity Market Control Entity for Physical Withholding	OPG's comment on these terms is similar to its comment on <i>global market power reference intertie zone</i> . The current definitions are implicit, relying on careful reading of Chapter 7 Section 22.9. However, this section makes use of the defined terms in its exposition.
Reference level & Reference quantity	Both <i>reference level</i> and <i>reference quantity</i> are defined as an "IESO- determined formula…" Throughout the Market Rules (e.g., Ch.7 22.1) the IESO references "registration" of reference levels and reference quantities. OPG is unfamiliar with the concept of registering a formula, as market data today is registered as individual values.
	Please explain the method by which these formulas will be stored and presented to MPs. Would the inputs to the formula be registered separately? As an example, the reference quantities for hydroelectric resources are composed of multiple "minimum head-based capability" values for each generating unit in the resource. Would the individual minimum head-based capabilities be registered and visible to participants?
simulated as-offered energy locational marginal price (LMP) & simulated reference	These two terms have exactly the same definition: "means the energy locational marginal price produced by simulating the day-ahead market or real-time market, as applicable"
quantity energy locational marginal price (LMP)	OPG suggests refining the definitions based on the purpose of each term.

MM 14.1 Market Power Mitigation Procedures

Section	Feedback
1	OPG has no comments at this time.

Section	Feedback	
2	Section 2.2.1 explains the designation of "import constrained" for the real- time market, but not for the DAM:	
	"For the real-time market, if the potential constrained area was import constrained for one interval within an hour, the entire hour will be considered to have been import constrained."	
	Please explain how a potential constrained area is considered import constrained in the DAM.	
3	OPG has no comments at this time.	
4	4.1: The section states:	
	"The IESO may modify and evaluate the designation of global market power reference intertie zones when:	
	there is a material change in the amount of electricity trade that an existing intertie zone can accommodate"	
	Please explain the criteria the IESO will use to define a "material change in the amount of trade an intertie zone can accommodate". With what frequency does the IESO expect a given intertie zone will experience "material changes"? Intertie flow limits can change substantially on an hourly basis. No matter the basis of the decision, OPG suggests the IESO should use language that is more objective.	
	4.2 : OPG suggests that in addition to the information listed, the IESO should also publish a short description of the criteria used each time an intertie zone's designation changes. OPG suggests emulating the publication requirements listed for uncompetitive interties in section 3.2. This would help promote transparency in the market.	

5.1: OPG feels that the timelines as set out will not drive efficient compliance.

First, the delay of up to 180 days between failure of the impact test and first notice to the MP does not give participants reasonable time to investigate and revise any behaviour that may have triggered the test. The IESO should inform participants of a potential physical withholding investigation shortly after the impact test is failed (e.g., within a week or month).

Ultimately, persistence multipliers should not apply to failures that occur within the IESO's timelines to provide the first notice of physical withholding (i.e., if notices are provided within 180 days, failures within the same 180 days should not trigger a persistence multiplier. If the notice is within one month, failures within the same month should not trigger a persistence multiplier). Participants must have knowledge of the failure in order to correct the behavior. Without this, participants may quickly reach the maximum persistence multiplier of three, prior to ever learning that they had failed the impact test.

OPG suggests that a reasonable approach would be for the IESO to issue notices of physical withholding on a monthly basis to align with other settlements reporting timelines.

Figure 5-1: Market Rules Ch. 7 s.22.15.22 states:

"If the conduct test and impact test repeated pursuant to section 22.15.21 are not failed when the alternative reference quantity value is used, the IESO shall discontinue the assessment and notify the market participant within 90 days of receiving the supporting documentation."

This potential outcome should be highlighted in Figure 5-1. Currently, the only outcome shown is "IESO to send second notice".

5.4: Please describe the process by which the IESO will inform MPs of a failure of the conduct or impact test. Assuming the IESO's reporting provides information to the MP about which offer data violated the tests, how would the IESO present this data?

OPG recommends that in the case that the Market Control Entity for physical withholding is not the same as the MP, the IESO should report this information to both the MP and the Market Control Entity. However, the manner and content of the reporting must respect any existing license provisions that shield sensitive market data between the MP and its Market Control Entity for physical withholding.

Section	Feedback
	This is a complex topic that requires further discussion between OPG and the IESO to understand the current and potentially future market power mechanisms in place.
	5.7.1 & 5.7.2: The equations in these sections refer to a term "MWhs Failed." Please define this term, or specify how it is calculated.
	5.7.3: Please clarify how persistence multipliers are updated following an MPs successful appeal to the Notice of Disagreement process regarding a second notice of physical withholding. OPG suggests that any accumulated persistence multiplier attributable to a second notice of physical withholding that was overturned through the Notice of Disagreement process should be discounted. Please also clarify the process and timelines whereby a persistence multiplier returns to 1.
6	OPG has no comments at this time

MM 14.2 Reference Levels and Reference	Quantities Procedures
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Section	Feedback
1	OPG has no comments at this time.
2	2.1 : The section identifies correctly that inputs for a resource may vary with season. OPG notes that seasonality for a given resource can be much more granular than the summer/winter regime stated in the manual. OPG suggests that where a participant can document more granular seasonal reference level inputs, those inputs should be accepted and used to produce reference levels.
4	OPG has no comments at this time.

5

In general, the process to request use of a higher cost fuel does not address the reality of resources for whom the higher cost fuel is the primary fuel. For these resources, the less expensive fuel may be unavailable by default, and only available under certain circumstances. As written, the MP responsible for the resource would have to submit documentation daily indicating that the lower cost fuel is unavailable. Such a process would be burdensome for not only the MP, but also the IESO. An alternative solution that considers the practical differences between primary and secondary fuels must be codified in the rules and manuals. OPG looks forward to working with the IESO to develop a functional solution to this problem.

Figure 5-2: The proposed "real-time market reference level change request window" does not align with the timelines described in Ch. 7 Section 22.5.7.2, and will cause additional administrative burden for MPs and the IESO. Ch.7 s.22.5.7.2 states that requests to use either a different fuel cost or the higher cost fuel must be submitted:

"...for the *real-time market*, no later than 130 minutes before the first *dispatch hour* in the request."

Importantly, this requirement does not specify a "request window" as is highlighted in Figure 5-2, but rather a single deadline. Figure 5-2 implies that participants cannot make requests before the opening of the "request window" and therefore must make individual requests (each of which must be received and assessed by the IESO) for each hour that the higher fuel cost component is required. Such an approach is impractical for resources' whose fuel availability does not change hourly. Participants should be able to identify in advance the periods where the lower cost fuel is unavailable, as implied by Ch.7 s.22.5.7.2. Such documentation should be accepted for both DAM and real-time market reference levels as far in advance as the market participant can justify.

5.1: Similar to OPG's comment on Ch.7 s.22.5.11, participants should have five business days to produce the requested documentation. MM 14.2 s.5.5 allows the IESO five business days to review submitted supporting documentation. The more generous timeline afforded to the IESO should be provided to MPs.

MM 1.3 Identity Management Operations Guide

Section	Feedback
	OPG has no comments at this time

Section	Feedback
	OPG has no comments at this time
	OPG has no comments at this time

MM 1.5 Market Registration Procedures

Section	Feedback
3.3.5.2	The manual defines the Maximum Generator Capacity (MGC) as follows:
	"MGC is the pseudo-unit maximum generator capacity as determined by the IESO".
	The above statement is true where there is one generator in a resource. However, this statement is incorrect where there are multiple generators connected to one resource.
	In the case of multiple generators connected to one resource, each generator has its own Maximum Active Power Capability value that is aggregated to create the MGC number for the resource in IESO registration. OPG suggests that MGC should be defined at the resource level, rather than generator level.
Table 3-2	The Responsibilities associated with the "Market Control Entity" and "Market Control Entity for Physical Withholding" Roles refer to Market Rules Chapter 7 section 28.1 and 28.2. Based on context OPG assumes the correct section references are in Chapter 7 section 22.9. Please confirm.

General Comments / Feedback

OPG thanks the IESO for providing this opportunity for participants to comment on Batch 2: Market Power Mitigation, and acknowledges the challenge of producing rules and manuals for an entirely new market process.

In general, OPG feels that reference level consultations should be a fair process, in which participants have the opportunity to present and defend documentation or analyses outside of the specifications in MR Chapter 7 and MM 14.2. OPG is concerned that while the IESO consultation team may be providing this openness currently, the consultations are occurring in the absence of any active market manuals or rules. The manuals and rules as phrased convey to the IESO powers to reject documents without providing additional opportunities for the two-way discussions that OPG feels are necessary for successful consultations. The IESO should endeavour to incorporate all past and future adjustments resulting from the ongoing consultations in the next draft of Market Rules and Manuals. OPG feels this would be in the best interest of both MPs and the IESO.