

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



## IESO Response to Implementation Feedback

Below are the IESO's responses to stakeholder feedback on the Market Power Mitigation batch of market rules and market manuals.

ID	Stakeholder	Section or Manual	Feedback	IESO Response
1	Evolugen	14.2.8.3.3	Regarding the Maximum Number of Starts per Day. If the generator cannot provide any of the supporting documentation listed in 14.2.8.3.3 is the IESO willing to work with the resource to review historical start/stop data and determine to develop a reasonable cap for the number for the maximum number of starts a resource has per day? Would the IESO be willing to utilize the expertise of their technical consultant to confirm this reasonable value? In section 22.3.2.7 it says a maximum number of 10,000 starts per day. If a generator chooses to not submit a reference level quantity will the 10,000 start/stops per day be used? What was the basis for choosing 10,000 start/stops per day, was there a technical reason behind this?	<p>Section 8.3.3. of Market Manual 14.2 outlines the supporting materials that can be provided to establish a maximum number of starts per day reference level.</p> <p>Historical start data cannot be used to support a requested maximum number of starts per day reference level. Supplementary documentation for this reference level must demonstrate a physical equipment limitation related to the requested maximum number of starts per day. Historical start data for the resource shows that the resource can accommodate some minimum number of starts, but does not show the maximum number of starts per day that the resource can accommodate.</p> <p>The default reference level will be used if the supporting documentation submitted by the market participant does not demonstrate a physical equipment limitation or if the market participant is unable to submit the required documentation.</p> <p>The default reference level value was set at 10,000 starts per day in order to prevent resources that have not demonstrated a physical equipment limitation from using this optional dispatch data parameter to influence scheduling and prices.</p> <p>This value for the default reference level was set to a number (10 000) which was expected to be large enough to prevent any resource from using this optional dispatch data absent provision of the relevant supporting documentation.</p> <p>Under MRP, market participants will continue be able to use their offer behaviour and strategy, static and dynamic dispatch data (including the new parameters) to manage their resources in an effective manner.</p>
2	Evolugen	14.2.8.3.1	The Energy Ramp rate. Ramp rate restrictions listed in a Water Management Plan are considered the absolute maximum or minimum (depending). Is the IESO willing to let a resource enter a ramp rate that is slightly above/below (depending) that threshold, which is consistent with the resource's current operations? As an FYI to the IESO: if a resource instantaneously violates a ramp rate, it is a reportable event and the operator needs to submit a non-compliance. Of more pressing an issue, these violations in ramp rates could result of public safety concerns, environmental issues or property damage.	<p>The IESO will give weight to practical considerations raised during the reference level consultation when determining a resource's energy ramp rate reference level.</p> <p>The conduct thresholds used when validating energy ramp rate reference levels allow the submitted energy ramp rate to pass the conduct test as long as it is no less than 50% of the energy ramp rate reference level. These conduct thresholds are set out in Chapter 7, section 22.13 of the proposed market power mitigation Market Rule amendments.</p> <p>Following day-ahead, and into real-time, market participants continue to have the ability to invoke SEAL to resolve instructions that would result in safety, legal, or operational concerns.</p>

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3	Evolugen	14.2.9.2.1	For Energy Reference Quantities/ 9.2.2 Operating Reserve. What does the IESO intend to use the minimum head-based capabilities for each generation unit for? We are having a difficulty in find where and for what reason this data is to be used. Also, what is meant by "This amount is reduced to account for outages and de-rates on that resource." Some units may have additional de-rates beyond head based restrictions, such as mechanical de-rates.	The sum of the minimum-head based capabilities for each generation unit of the resource will set the energy and operating reserve reference quantity. Reference quantities are IESO-determined estimates for the quantity of energy or operating reserve a market participant would have offered without restrictions to competition. Reference quantities are used when the IESO assesses physical withholding. Reference quantities will account for outages and derates so as to not penalize a market participant for withholding MW quantities when it could not have offered such quantities into the market. For more details on the use of reference quantities, please refer to section 22.15 of Chapter 7 in the market power mitigation Market Rule amendments, section 5 of Market Manual 14.1 and section 9.2 of Market Manual 14.2.
4	Evolugen	14.2.6.4.5	Forebay Refill Opportunity Cost. We understand the intention of this optional parameter in calculating the opportunity cost. However, while it can be based on the provided methodology to arrive at some value, it will not always capture the true value of that water. For example, this calculation may produce 3 days or some small number, but on an operational side during periods of low inflows, we need to be so careful with our water that the 1 extra hour of water is really going to be needed 2 week, two months or some period down the road for compliance minimum flows. How can one put a value on that? Once again, this all comes back to the concept that if the IESO is going to change the offer/bid price (potentially mitigate down the offer price) where a resource could be called for marginal generation the operator may choose the force out/force de-rate the unit making the resource not available even for an ORA, ultimately impacting system reliability.	The current design for the forebay refill opportunity cost relies on historical data to create an estimate of the value of foregone operating reserve revenues. This opportunity cost already relies on very conservative assumptions regarding inflow data due to the fact that the IESO does not have access to inflow data. These assumptions will tend to increase the opportunity cost values upwards. The market power mitigation framework will not impact a market participant's ability to request manual constraints to protect the safety of equipment or personnel or to comply with applicable law. As noted in previous stakeholder discussions, the risk of a resource being called for marginal generation exists today and is not a feature that is unique to the renewed market.

5	Evolugen	14.2.6.4.4.2	<p>Market Participant Election of Approach to Determine Base LMPs.</p> <p>If both proposed options are acceptable to the IESO, then both options should be put in place and run simultaneously, and the maximum of either options should be automatically applied as the base LMP on a continuous basis. In doing so, all hydro units would be treated equally when the IESO needs to choose between two hydro units to dispatch. Allowing hydro units to choose which option to commit to for an entire year could lead to inefficient use of available hydro capacity for the IESO. For example, if the more flexible hydro is allowed to price itself at \$1,000 above the least flexible hydro, it would result in the IESO dispatching the least flexible hydro first, exhausting it and forcing it out, and losing its operating reserves available to respond to a real emergency. Under our proposed dual-model, automatic selection approach (i.e. both options being run simultaneously and automatically selected by the IESO), a hydro unit with 1 hour of marginal run left before being forced out would not be allowed to price itself as high as a neighbouring hydro unit with unlimited hours of run time left, simply because the first unit chose a different method 3 months ago. In this context, all operators would voluntarily compete using the same price caps, would not need to manually decide which 'option' to use, and would not need to adjust offer behaviour depending on which 'option' is currently in place. This creates a leveled playing field for both operators and the IESO. As such, the IESO would remove the uncertainty of a hydro unit potentially exercising market power due to a decision made months ago, which cannot be changed more than once a year. In turn, the only differentiating and decision factor for hydro operators would be the location of the unit (as determined by LMP/congestion) and its storage horizon: this setup would be easier for the IESO to monitor. If a unit were given the possibility to choose and lock in to a single option, their operators would be forced to analyse and pick the option that they believe will give them the most flexibility for a year (i.e. the option resulting in a higher ref price), and the hydro units that make the wrong but unchangeable decision will be forced to price itself below others, potentially resulting in the IESO inefficiently using its hydro fleet. Our proposed dual-model, automatic system also has the advantage of reflecting operating conditions better, as base LMPs would be automatically determined on a daily and continuous basis. In contrast, the IESO's proposal requires an operator to commit to one single option for an entire year. Below is an example for your consideration:</p> <ul style="list-style-type: none"> <li>- Hydro A and Hydro B are identical hydro units owned by different companies, and located in the same region. They each picked different reference price options.</li> <li>- Hydro A has 1 hour of marginal run until forced out, with a ref price of \$50 (P95 method).</li> <li>- Hydro B has 24 hours of marginal run, with a ref price of \$1000 (28D method).</li> <li>- Hydro A will price itself at its max of \$50, and cannot go higher even if it wants to signal that it's not flexible.</li> </ul>	<p>The storage horizon opportunity cost election of Option 1 and Option 2 provides the ability for a market participant to request that the IESO uses an opportunity cost methodology that is aligned with how the market participant itself determines opportunity cost. Option 1 bases forecasts on seasonal pricing trends and Option 2 forecasts opportunity costs based on pricing trends of a more immediate horizon.</p> <p>Option 1 was added in response to stakeholder feedback and both options are, in the view of the IESO, reasonable ways to determine opportunity costs.</p> <p>There is no clear or principled reason why the reference level of a resource should be based on the highest of the two options.</p> <p>The scenario outlined in the comment is one the IESO cannot consider as the IESO does not have visibility into inflows, therefore no reference level methodology can account for it.</p> <p>Reference levels do not confer any obligation on a market participant related to the offer prices they submit. Market participants are free to offer whatever they see fit to the market and only if all of the relevant tests are failed is mitigation applied to a resource. The resource must have market power, it must fail the conduct test and also fail the impact test. The example described does not account for these design features of market power mitigation.</p>
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			<ul style="list-style-type: none"> <li>- Hydro B can price itself at \$1000, but wants to get called because they have flexibility, so they price themselves at \$75 because they consider that a good price, and cannot know that Hydro A has a \$50 cap.</li> <li>- Under the IESO proposal, Hydro A will get called first, run one hour, and then get forced out. IESO will lose OR from Hydro A for the rest of the day, and Hydro B will not get called.</li> <li>- Under our dual-model, automatic system, Hydro A and Hydro B would price themselves at the same price cap. The Hydro that wants to be dispatched more will price themselves lower than their price cap, and the other that does not want to will price themselves at the cap. Neither Hydros need to consider which option is currently locked in place, and the IESO need not consider whether dispatching the lower priced Hydro would force it out.</li> </ul>	
6	H2O Power	22.1	<p>22.1.3 stipulates that “a Market Participant shall provide to IESO all information and supporting documentation that IESO may require to determine a resource’s reference level.” The experience to date suggest that IESO is, in many instances, seeking information on technical parameters that either (a) simply don’t exist due to equipment vintage and history or (b) while the parameter may have been available and valid for the original operating mode of the equipment, changes to operating mode (e.g., from base load to peaking) would cause said parameter to change. There is no consideration given for a Market Participant’s experience based knowledge of his facilities and equipment.</p>	<p>Section 3.2 of Market Manual 14.2 sets out how a market participant may support a requested reference level in the absence of the supporting documentation listed in the market manual. The IESO continues to work with market participants where supporting documentation is unavailable or outdated.</p>
7	H2O Power	22.5; 22.6	<p>The underlying theme in this section suggest that IESO has broad powers to change or amend reference levels or quantities while a Market Participant’s opportunities to do so are limited. There is a fundamental issue of fairness in question.</p>	<p>Market participants can request that the IESO review its resources’ reference levels or reference quantities at any time if the market participant believes the reference level or reference quantity does not accurately describe the short-run marginal costs or operational characteristics of that resource (Chapter 7, sections 22.5.4 and 22.7.1.3). Market Manual 14.2, Section 3.3 sets out the steps that market participants may take to initiate the process of having a resource's reference levels determined or updated.</p> <p>The IESO's authority to change a resource's reference levels or reference quantities, once they have been registered, is limited and is restricted by the conditions set out in section 22.5.1 (reference levels) and 22.7.1 (reference quantities).</p> <p>The IESO is unclear as to how the above noted provisions could give rise to a question of fairness, but will continue to invite input from market participants and will work to insure that the market rules are applied in a fair and non-discriminatory manner.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



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8	H2O Power	22.8	Market Participant may request IESO to engage a consultant to independently review a reference level. There appears to be no provision for the Market Participant to be consulted on the selection of the consultant, which then raises the question of the degree of independence the consultant has. The option should also be present whereby the Market Participant can engage an independent consultant to conduct the same exercise. Further in this section, IESO can reject the Independent Consultant's findings on some very narrow grounds. A weighted view of the findings would provide a more equitable approach.	Section 22.8.2 has been updated to specify that the consultant be independent of the IESO and the market participant requesting the review. The IESO must adhere to the requirements for "Other Included Entities" in the Ontario Public Service Procurement Directive, which includes requirements regarding declaring conflicts of interest and permitting the IESO to select only the highest ranked submission that met all mandatory requirements set out in a procurement document. These controls will ensure that any consultant procured is sufficiently independent of the IESO and the market participant. Requirements underlying the procurement to secure the consultants that can be used for the independent review process will be made available for input from stakeholders. IESO believes that the grounds set out in section 22.8.7 apply narrow circumstances where weighting the findings would not make sense.
9	H2O Power	22.10	The built in delays for triggering a Dynamic Constrained area should be amended as follows: (a) Include export constrained areas. This is of particular concern to areas where significant transmission limitations exist as a matter of routine operation or exposure. Removal of critical elements can quickly constrain or bottle significant generation. (b) Remove the 120 previous dispatch hours as the trigger to initiate a dynamic constrained area for planned outages of significant duration, eg, more than 8 hours as starting point. Change the trigger to start on the scheduled outage start time/date and continue through the duration of the outage.	In regards to (a): When an area is export constrained, supply located in this area cannot be used to serve incremental load outside this area. In this circumstance there is no restriction to competition. Import constrained areas result in restricted competition as the loads in that area can be only supplied by the resources within the area and there is no ability to supply incremental demand with supply located outside the area. As such, export constrained areas do not meet the requirements to be included. In regards to (b): It is not practical to definitively link outages to restrictions to competition in the manner suggested. There are numerous factors that collectively impact the extent to which a particular outage restricts competition. The approach in the market power mitigation framework accomplishes the appropriate outcome and results in designations only when an outage does in fact restrict competition.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
10	H2O Power	22.14	<p>The conditions and process listed for Conduct and Impact tests for both Energy and Operating Reserve require some additional thought, as the application of the draft Rules, as we understand them, would have some unintended consequences that IESO may not necessarily recognize.</p> <p>Specific to hydroelectric resources, there will be occasions whereby, due to hydrological conditions, the Market Participant's offers for Energy and/or Operating Reserve will be constrained by conditions within the facility's Water Management Plan (WMP). The WMP for most hydroelectric facilities in Ontario is an instrument authorized by and enforceable under the Lakes and Rivers Improvement Act (LRIA). Some further facilities are governed under other agreements bound by either interprovincial or international treaties.</p> <p>Offers for hydroelectric resources must factor in the WMP requirements for both short and longer term impacts such as to take all reasonable measures within a facility operator's control pre-emptively to remain within the bounds established in the WMP. A Market Participant cannot risk offering either energy or Operating Reserve in a manner such the impact of those offers and likely resulting dispatch puts the facility at risk of violating the facility's Water Management Plan, which is authorized and enforced under the Lakes and Rivers Improvement Act. Those conditions may be based on either a short term or/and long term view of the hydrological conditions, an assessment of which the Market Participant should be the sole judge to evaluate, based on his operating knowledge of his facilities.</p> <p>While offers can be updated in real time and SEAL provisions can be applied to mitigate and hopefully avoid the Environmental and Applicable Law outcomes, the Market Participant still remains financially bound on the Day Ahead commitments that he has been effectively forced to make by application of the ex-ante changes, absent any change to current formulation and apparent intent expressed in Sections 22.14 and 22.15.</p>	<p>Building from the high-level design and detailed design we have come to a point following many constructive discussions with stakeholders and review of successful frameworks in neighbouring jurisdictions to a Market Power Mitigation framework that balances the needs of dispatchable participants along with the market protection demanded by all sector participants.</p> <p>MRP has also introduced new operational parameters that hydro resources can use to reflect their operational characteristics in the scheduling process. The market power mitigation framework will not impact a market participant's ability to request manual constraints to protect the safety of equipment or personnel or to comply with applicable law.</p> <p>Ex-ante mitigation, in section 22.14 of Chapter 7, and ex-post mitigation of physical withholding, in section 22.15 of Chapter 7, are keystones of the market power mitigation framework. The choice to incorporate these into the market power mitigation framework was discussed with stakeholders during the high-level design phase of market renewal. The IESO engaged participants through the detailed design phase on the specific details around the approach to carry out ex-ante mitigation and ex-post mitigation for physical withholding. As such, they will remain in the market power mitigation framework.</p> <p>Further, the IESO does not believe that the design and rules around the renewed market would put market participants at any increased risk of violating applicable laws or regulations. Participants understand the role of SEAL provisions, and the IESO will endeavour to continue to work with the waterpower community to achieve a common understanding on this point.</p>
11	Northland Power	General	<p>Northland's primary concern relates to the stringency of the physical withholding framework advanced by the IESO. As proposed, the conduct threshold may be violated if a resource offers as little as 2% below its reference quantity. For the resources in Northland's portfolio, this represents a threshold of as little as 2 MW. Such a small threshold is particularly concerning given the process for establishing reference levels, which effectively relies on historic production to establish an average production curve. The combination of A) the stringency of the conduct threshold, and B) and the variability of actual facility capability relative to an average, are certain to result in numerous "false positives" that launch an inappropriate and burdensome review for physical withholding.</p>	<p>The IESO will not modify the conduct thresholds as requested at this time. As part of detailed design feedback, the IESO received a comment that the conduct thresholds for physical withholding were too restrictive and would result in adverse outcomes. These conduct thresholds were adjusted in response and the current conduct thresholds appeared in the Market Power Mitigation Detailed Design 2.0 document.</p> <p>A market participant has the opportunity to submit relevant supporting information regarding the availability of a resource being assessed for physical withholding. This will ensure that any settlement charges for physical withholding will be based on the actual facility capability on that dispatch day.</p>

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12	Northland Power	General	<p>Furthermore, the test for physical withholding is fundamentally missing an assessment of intent/benefit. If a resource fails to offer in its full capacity, but doesn't benefit from any sort of portfolio effect (say as a result of another of its resources receiving a higher price), is it appropriate for that resource to be penalized? With the IESO's market control entity framework, it seemingly has the information needed to conduct such an assessment.</p>	<p>Similar to the approach for assessing economic withholding via ex-ante mitigation, the assessment of physical withholding focuses on determining whether competition was restricted, a market participant offered less energy or operating reserve than it had available and prices were significantly than they would have otherwise been. The market impact of such exercises of market power does not differ based on intent. Section 3.9 of the market power mitigation detailed design document makes clear that the market power mitigation framework does not assess intent when determining whether a resource has exercised market power.</p>
13	Power Advisory	General	<p>Consistency and Continuity from Detailed Design to Draft Amendments to Market Rules and Market Manuals</p> <p>There appears to be key areas within the Market Power Mitigation Detailed Design Issue 2.0 (i.e., "MPM Detailed Design") that have not been included within MR-00455 or the applicable Market Manuals. For example, the methodology for IESO to determine Broad Constrained Areas and its application within IESO's assessment whether an MP has exercised market power is not included within either the amendments to Market Rules or Market Manuals. Considering that the application of IESO utilizing Broad Constrained Areas within assessment of the exercise of market power is an IESO obligation, the Consortium believes this aspect of the MPM framework should be included within MR-00455.</p> <p>The Consortium was of the initial opinion that Broad Constrained Areas had been dropped from the MPM framework because it was not included within MR-00455 or MM 14.1; however, we had learned that Broad Constrained Areas are still part of the MPM framework upon posing a question to IESO during the August 26, 2021 webinar and received confirmation that Broad Constrained Areas are still part of the MPM framework.</p> <p>This point raises concern that there are potentially other important aspects of the MPM Detailed Design that will be utilized within the MPM framework and may not be included within MR-00455, MM 14.1, or MM 14.2.</p> <p>Overall, this point speaks to an overarching process point – how will IESO inform MPs and stakeholders when components within MPM Detailed Design are changed, will IESO release subsequent Issues of the MPM Detailed Design, and how will IESO inform MPs and stakeholders on other components within the MPM Detailed Design that have not been explicitly included within MR-00455, MM 14.1, and MM 14.2? The Consortium recommends this process question be discussed with MPs and stakeholders, including the Technical Panel (TP).</p>	<p>Determining which resources meet the conditions for BCAs will be based on the congestion component of the locational marginal prices from the as-offered pricing run in the calculation engine. Those dispatchable resources that will have a locational marginal price congestion component higher than \$25/MWh will be flagged for the conduct test with the BCA thresholds.</p> <p>This methodology to determine BCAs is entirely contained in the ex-ante mitigation logic implemented in the calculation engines.</p> <p>Per section 22.14, the details of ex-ante mitigation will be set out Appendix 7.1A and Appendix 7.2A of the market rules. These appendices will be brought forward in a future batch of market rule amendments. The IESO will continue to utilize the existing process for providing updates to stakeholders regarding information with respect to any updates or changes to the MRP design. An example of one of these updates was at a session on June 24, 2021 (<a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/imrm/imrm-20210624-presentation.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/imrm/imrm-20210624-presentation.ashx</a>).</p>

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14a	Power Advisory	General	<p><b>Inconsistent Details and Lack of Clarity in Draft Amendments to Market Rules and Market Manuals.</b></p> <p>The Consortium acknowledges challenges to achieve a clear and workable balance between listing MP and IESO obligations within the Market Rules and other important points combined with sufficient level of details regarding these obligations and points. This balance also drives the details and information to be included within Market Manuals.</p> <p>However, there are some areas within the draft amendments to the Market Rules that may better be placed within Market Manuals and vice versa. For example, the physical withholding rule amendments are very detailed while the rule amendments regarding determination and application of Constrained Areas are not very detailed. Similarly in other areas within amendments to rules and manuals, the Consortium believes that some details regarding physical withholding (e.g., threshold percentages, threshold prices, etc.) should be placed within Market Manuals (i.e., similarly to actual offer price floor amounts applicable to variable generators).</p>	<p>The IESO has aimed to be clear in drafting both the market rules and market manuals.</p> <p>The level of detail in a particular provision, or degree of specificity with which a requirement is articulated, are not determined by the document in which the text is expressed, but by the nature of the requirement or provision being expressed. As such, participants should not expect a consistent level of detail or specificity in either the market rules or manuals.</p>
14b	Power Advisory	General	<p><b>Inconsistent Details and Lack of Clarity in Draft Amendments to Market Rules and Market Manuals (Cont'd)</b></p> <p>There are some areas within the draft amendment to the Market Rules that require clarification (even after reviewing corresponding sections from the MPM Detailed Design). For example, the Market Control Entities concept and application relating to registration data and information and its application towards determining whether physical withholding was exercised requires more clarity and justification.</p>	<p>Please see the response to Power Advisory 28.</p>
15	Power Advisory	General	<p><b>Insufficient Details in Draft Market Rules and Market Manuals</b></p> <p>As mentioned within the sub-section above, the methodology to determine Constrained Areas and their application requires more clarity within the Market Rules but requires more details within MM 14.1.</p> <p>The methodology IESO will use to establish Constrained Areas is extremely important because the Conduct &amp; Impact Test will not be applied by IESO unless an MP's resource(s) is located within a Constrained Area (e.g., Narrow Constrained Area, Dynamic Constrained Area, etc.). Therefore, more details are required regarding the methodology IESO will use to determine Constrained Areas and their application within the MPM framework (i.e., engineering equations to determine Constrained Areas).</p>	<p>Section 2 of Market Manual 14.1 has been updated to provide more details regarding the methodology the IESO will use to determine constrained areas.</p> <p>The use of NCAs and DCAs in the market power mitigation framework will be found in the calculation engine batch and the settlement batch as they are used for ex-ante mitigation and settlement mitigation.</p> <p>NCAs and DCAs are also used in ex-post assessment of physical withholding. Their use in ex-post assessment of physical withholding is shown in sections 5.4 and 5.5 in Market Manual 14.1 and is also described in sections 22.15.3 and 22.15.4 of Chapter 7.</p>



# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



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16	Power Advisory	General	<p>Needed Reforms to Governance, Decision-Making, and MP Recourse Within IAM</p> <p>MPs and stakeholders have been calling for reforms to the governance, decision-making, and MP recourse within the IESO-administered markets (IAM) for multiple years. Because of issues raised, IESO created the Governance and Decision-Making Working Group to provide advice on this matter. While IESO made positive changes based on this Working Group's deliberations, more work and changes are required to bring IAM up to par with other wholesale electricity markets in Canada and the U.S. For example, all amendment to the market rules in Alberta are brought forward for open stakeholder proceedings and decisions by Alberta's electricity regulator (i.e., Alberta Utilities Commission), and same for all amendments to market rules within NYISO, ISO-NE, PJM, MISO, SPP, and CAISO where the U.S. Federal Energy Regulatory Commission (FERC) holds open stakeholder proceedings towards FERC decisions. Simply put, the same level of governance, decision-making, and MP recourse framework does not exist within IAM.</p> <p>The Consortium acknowledges the positive step of IESO creating an Independent Review within the MPM framework regarding establishment of facility-specific Reference Levels and Reference Quantities. However, this Independent Review is not applicable to other aspects of the MPM framework or more broadly across IAM.</p>	<p>While the question of broader governance structures in the IAM is beyond the scope of the market power mitigation rule review, or the Market Renewal Program, the IESO continues to engage and respond to stakeholders' input and concerns.</p>
17	Power Advisory	General	<p><b>Improve Alignment of Stakeholder Engagement Process and Feedback Timelines</b></p> <p>During TP's October 5, 2021 meeting, an initial discussion was held regarding the MPM framework and its draft rule and manual amendments. While additional discussions will be held at future TP meetings, TP would have had a more meaningful and insightful discussion if the initial discussion was held after IESO, TP, and all MPs and stakeholders would have had the opportunity to review MP and stakeholder comments on MR-00455, MR-00461-R01, MM 14.1, MM 14.2, MM 1.3, and MM 1.5 (as comments on these draft amendments to Market Rules and Market Manuals are due to IESO by October 15, 2021).</p> <p>Therefore, the Consortium recommends that IESO review timelines for receiving comments from MPs and stakeholders, to enable TP members to have further insights prior to having discussions regarding IESO proposed and draft amendments to MRP related amendments to Market Rules and Market Manuals.</p>	<p>The intent of the October meeting was to provide the Technical Panel with an opportunity for education and review by giving them a walk through of the materials at an early stage, in advance of the completion of the stakeholder review process. The IESO is working with the Technical Panel on an ongoing basis to devise a feasible schedule that includes education, and review of stakeholder feedback in advance of the vote to post.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



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18	Power Advisory	22.1.1	Shouldn't MPs have the obligation to register Reference Levels for their facilities and not IESO with the obligation to register Reference Levels?	<p>The IESO will register reference levels for the reasons laid out in the July 2018 stakeholder session on market power mitigation during the high level design phase of market renewal.</p> <p>The rationale for this decision was:</p> <ul style="list-style-type: none"> <li>• This approach ensures that cost-based reference levels that are used will be consistent with the established methodology</li> <li>• The IESO will have the incentive to avoid cost-based reference levels that are too low to avoid unnecessary administrative burden associated with processing disputes on reference levels</li> <li>• Participants will be provided mechanisms to resolve issues around costs</li> </ul> <p>Having market participants determine reference levels would have reduced visibility into the calculation process to the IESO, requiring after-the-fact processes when further confirmation of costs was necessary. These after-the-fact processes would not result in competitive market outcomes as it would be impractical to resettle the market to eliminate any potential impact to other market participants.</p>
19	Power Advisory	22.1.1 and 22.1.2	IESO determination and registration of Reference Levels suggests that IESO has final decision-making authority, but Reference Levels (and Reference Quantities) could be determined by the Independent Review; therefore, these sections require cross references to Independent Review decisions and MPs' rights under the dispute framework in Chapter 3 in the event of disagreements with IESO or the Independent Review	<p>Independent review decisions and the dispute resolution process do not require specific cross-references.</p> <p>Section 22.8.2 prohibits the IESO from registering a reference level or reference quantity that is the subject of an independent review except in accordance with section 22.8.</p> <p>The dispute resolution process applies generally and does not need to be specifically referenced in order for it to apply. See section 2.2.1.1 of Chapter 3:</p> <p><i>"Subject to sections 2.2.3 and 3.8 and to section 8.8.1 of Chapter 2, the dispute resolution regime provided for in this section 2 shall apply to:</i></p> <p><i>2.2.1.1 any dispute between the IESO and any market participant which arises under the market rules, market manuals or any standard, policy or procedure established by the IESO pursuant to these market rules, including with respect to any alleged violation or breach thereof, whether or not specifically identified in the market rules as a dispute to which this section 2 applies [...]."</i></p> <p>Other than the time limit set out in proposed market rule amendment Chapter 3, new section 2.5.1.A.6, using the independent review process does not affect a market participant's rights to access the dispute resolution process.</p>
20	Power Advisory	22.1.8	IESO needs to provide further explanation and rationale why "A dispatchable resource installed pursuant to the Canadian Nuclear Safety Commission's requirement for nuclear power plants to maintain standby and emergency power systems is exempt from the requirements in, and market power mitigation framework established by, this section 22." – does this exempt all nuclear generators from IESO assessment of potential economic withholding? If so, why?	<p>This requirement exempts only back-up generators that have been installed at nuclear facilities to provide standby or emergency power to comply with section 8.9.1 of the Canadian Nuclear Safety Commission's REGDOC-2.5.2, Design of Reactor Facilities: Nuclear Power Plants. The market power mitigation framework will still apply to the nuclear facilities themselves.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
21	Power Advisory	22.3.1	Same comment as above (Sections 22.1.1 and 22.1.2)	Please see the response to Power Advisory 19.
22	Power Advisory	22.3.2	IESO needs to provide explanation and rationale for the listed default Non-Financial Dispatch Data parameters; further, are parameters better placed within the applicable Market Manual?	These default values may be determined for market participants that do not request reference levels or that fail to provide documentation that supports a requested reference level. These default non-financial reference levels are set to the most permissive levels so they do not create constraints for the calculation engines. Please see response to Capital Power 64 with respect to the allocation of content as between the market rules and market manuals.
23	Power Advisory	22.5.1, 22.5.2, 22.5.9, and 22.5.10	Same comment as above (Section 22.1.2) regarding IESO with final decision-making authority	Please see the response to Power Advisory 19.
24	Power Advisory	22.6.1 and 22.6.2	Same comments as above (Sections 22.1.1 and 22.1.2)	Please see the response to Power Advisory 19.
25	Power Advisory	22.7.1 and 22.7.2	Same comments as above (Section 22.1.2)	Please see the response to Power Advisory 19.
26	Power Advisory	22.8.3	If no consultant responds to IESO's Request for Proposals (RFP), it is not satisfactory for IESO to then be able to finalize Reference Levels and Reference Quantities and then to register these Reference Levels or Reference Quantities – there needs to be a way to initiate the Independent Review or some alternative satisfactory process	In such situations a market participant may continue to request an independent review every 60 days (section 22.8.3). In addition, and in the event a market participant believes that the IESO has misapplied the applicable market rules in setting reference levels or reference quantities, the market participant would have access to the dispute resolution process set out under the market rules Chapter 3, section 2.
27	Power Advisory	22.8.8	This appears to be one-sided in favor of IESO regarding acceptance of the Independent Review findings and is not fair to the applicable MP, cross references should be made to the dispute framework in Chapter 3 where MPs do not agree with outcomes resulting from the Independent Review	The IESO's ability to reject a finding is limited to specific situations where the consultant made a mistake, acted outside the scope of the retainer, or would require the IESO to breach the market rules. These exceptions were set out in section 3.17.4 of the Market Power Mitigation Detailed Design 2.0 and were discussed in the stakeholder session held on December 15, 2020. Please see the response to Power Advisory 19 regarding cross-references to the dispute resolution process set out in market rules Chapter 3 section 2.
28	Power Advisory	22.9	Overall the Market Control Entities framework is complicated and confusing, and it is not clear why IESO requires detailed corporate ownership information; therefore, IESO needs to explain the requirements and rationale within these proposed draft rule amendments	In order to assess physical withholding, the IESO must have visibility into whether the market behaviour of resources owned by multiple market participants is being coordinated or influenced by common corporate entities. Without this information, the IESO is unable to effectively detect attempts by such corporate entities to influence prices upwards by withholding small amounts of MWs from a large number of resources. The introduction of virtual transactions into the renewed market amplifies the need for the IESO to be able to assess links between virtual traders and other market participants.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
29	Power Advisory	22.10	Broad Constrained Areas (BCAs) should be included in this section, similarly as Narrow Constrained Areas (NCAs) and Dynamic Constrained Areas (DCAs) have been included	Broad constrained areas are part of the ex-ante mitigation logic, which is implemented in the calculation engines. Determining which resources meet the conditions for BCAs will be based on the congestion component of the LMPs from the as-offered pricing run in the calculation engine. Those dispatchable resources that will have LMP congestion component higher than \$25/MWh will be flagged for conduct test with the BCA thresholds. The calculation engine market rule amendments will be brought forward in a future batch of market rule amendments, available for stakeholder comment starting in February, 2022.
30	Power Advisory	22.10.1.2	IESO should publish Potential Constrained Areas (PCAs) on their website, at least on an annual basis – during the August 26, 2021 IESO MPM webinar presentation, IESO staff stated both that PCAs will, and will not, be made publicly available	The IESO does not feel that publishing potential constrained areas publicly has value. Doing so would provide information for which the only purpose is to identify how much market power can be exercised at specific resources. Publishing the potential constrained areas publicly would only provide information about if the tighter NCA and DCA conduct and impact thresholds could possibly be applied to a resource. Potential constrained areas do not directly influence scheduling or dispatch. Their only purpose is to provide the list of possible NCAs and DCAs. The IESO has committed to a high level of transparency with regards to NCAs and DCAs, providing market participants ample time to revisit offer strategy prior to such designations come into effect.
31	Power Advisory	22.10.2.1	IESO needs to provide rationale regarding the listed NCA thresholds; further, such thresholds may be better placed within the applicable Market Manual	The threshold for designating NCAs in section 22.10.2.1 is also found in the market power mitigation detailed design document. The IESO provided information regarding the rationale for this designation threshold in response to a comment on the detailed design document. This feedback and response can be found in IESO responses to stakeholder feedback on detailed design, comment 295, found here: <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx</a> . Please see response to Capital Power 64 with respect to the allocation of content as between the market rules and market manuals.
32	Power Advisory	22.10.2.3	IESO needs to better describe what constitutes “material configuration changes” regarding their ability to update the list of resources located within NCAs	Section 22.10.2.3 has been updated in response to this comment.
33	Power Advisory	22.10.3.1; 22.10.3.3	Regarding DCAs, same comment as above regarding threshold levels (Section 22.10.2.1)	The threshold for designating DCAs in section 22.10.3.1 and 22.10.3.3 was also found in the market power mitigation detailed design document. The IESO provided information regarding the rationale for this designation threshold in response to a comment on the detailed design document. This feedback and response can be found in IESO responses to stakeholder feedback on detailed design, comment 297, found here: <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx</a> .
34	Power Advisory	22.10.3.4	RTM is italicized but it is not included within Chapter 11 (Definitions) of the Market Rules nor included within MR-00461-R01 – this re-occurs throughout multiple sections within MR-00455	The IESO has made updates in response to this comment.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
35	Power Advisory	22.11	<p>Regarding Global Market Power Reference Intertie Zones, there is a fundamental flaw within the MPM framework by not including assessment and potential mitigation of imports at Ontario interties connecting to jurisdictions that do not administer wholesale electricity markets (e.g., Quebec, Manitoba) – this point had been raised during stakeholder engagements relating to MRP High-Level Design, yet IESO did not provide satisfactory answers for such omission of imports at these interties; for example, the following proposed draft rule amendments makes this point because such results have occurred within IAM at Quebec and Manitoba interties within pre-dispatch and the real-time energy market:</p> <ul style="list-style-type: none"> <li>Section 22.12.1.1 – a single market participant received at least ninety percent of the day-ahead market scheduled energy withdrawals or injections over boundary entity resources connected to that intertie zone scheduled in the DAM in the previous calendar quarter; or</li> <li>Section 22.1.2.1.2 – the IESO reasonably determines that effective competition in that intertie zone is or is expected to be restricted</li> </ul>	<p>Global Market Power Reference Intertie Zones are used when determining if the conditions to test <u>domestic</u> dispatchable suppliers for global market power in ex-ante mitigation are met. They are <u>not</u> related to assessing intertie transactions for intertie withholding.</p> <p>The IESO provided clarifying information regarding the use of global market power reference intertie zones in response to comments on the detailed design document.</p> <p>The relevant feedback and response can be found in IESO responses to stakeholder feedback on detailed design, comments 287, 288 and 289, found here: <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx</a>.</p>
36	Power Advisory	22.13.1	<p>This section states MPs submitting Non-Financial Dispatch Data, yet Sections 22.1.1 and 22.1.3 states IESO (not MPs) registering Reference Level and Reference Quantity data; therefore, there appears to be inconsistencies between these sections (as well as within the applicable Market Manual)</p>	<p>Sections 22.1 and 22.13 contemplate different processes. Section 22.1 is about the IESO registering reference levels for a resource. The market participant must submit various data to the IESO to assist it in determining a resource's reference levels, but the IESO is ultimately responsible for registering them. The IESO determines reference levels in consultation with each market participant as set out in section 3.13 of the Market Power Mitigation Detailed Design 2.0. Section 22.13 is related to how the IESO uses reference levels after they have been determined.</p>
37	Power Advisory	22.13.1	<p>Same comments as above regarding thresholds potentially better placed within applicable Market Manuals</p>	<p>Please see response to Capital Power 64 with respect to the allocation of content as between the market rules and market manuals.</p>
38	Power Advisory	22.14.1	<p>Based on questions asked during the August 26 webinar regarding Sections Appendix 7.1A and Appendix 7.2A that have not been included within MR-00455, IESO responded to questions via an email (September 27) to MPs and stakeholders stating that "These appendices will be the market rules that govern the day-ahead calculation engine and the pre-dispatch and real-time calculation engines and will be part of a future market rules amendment, in Q2 2022." – this explanation is understandable and consistent with what has been conveyed to MPs, stakeholders, and TP previously; however, based on the purpose of this section, cross references to the applicable Market Manuals should be made regarding procedural steps IESO will take to administer the Conduct &amp; Impact Test (i.e., not just the forthcoming inputs to the applicable calculation engines as referred to within IESO's September 27 email)</p>	<p>The conduct test and impact test for ex-ante mitigation of economic withholding are performed entirely within and by the calculation engines. The IESO does not administer these tests outside the calculation engines and there are no procedural steps associated with them that will need to be described in a market manual.</p>
39	Power Advisory	22.15.3, 22.15.4, 22.15.7, 22.15.10, 22.15.12, and 22.15.15	<p>Regarding ex-post mitigation of potential physical withholding, same comment as above regarding thresholds potentially better placed within applicable Market Manuals</p>	<p>Please see the response to Power Advisory 37.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
40	Power Advisory	2.5.1A.6	This provision regarding MPs' ability to exercise disputes should not solely be referencing the Independent Review to determine Reference Levels and Reference Quantities – it should be cross referencing the entirety of the MPM framework as described in Section 22 regarding all circumstances to which MPs could dispute IESO determinations or resulting actions or outcomes (e.g., issuing settlement charges where IESO applies mitigation for physical withholding, etc.); overall, the entire dispute and notice of disagreement framework needs to be carefully reviewed to address needed enhancements to the governance, decision-making, and MP recourse framework relating to application and outcomes of the MPM framework and for the entirety of IAM considering the fundamental changes that will result from implementation of MRP	Section 2.5.1A.6 was added for consistency with the independent review process's expedited timelines. The IESO does not anticipate that the notice of dispute framework will otherwise need to be amended due to other aspects of the market power mitigation framework where a dispute may arise, as the framework applies generally and does not need to be specifically referenced in order for it to apply. See section 2.2.1.1 of Chapter 3: <i>"Subject to sections 2.2.3 and 3.8 and to section 8.8.1 of Chapter 2, the dispute resolution regime provided for in this section 2 shall apply to: 2.2.1.1 any dispute between the IESO and any market participant which arises under the market rules, market manuals or any standard, policy or procedure established by the IESO pursuant to these market rules, including with respect to any alleged violation or breach thereof, whether or not specifically identified in the market rules as a dispute to which this section 2 applies [...]."</i>
41	Power Advisory	Broad Constrained Areas	Broad Constrained Areas – assuming applicable rule amendments are added relating to BCAs, then BCAs need to be defined (similarly to NCAs and DCAs)	Please see the response to Power Advisory 13.
42	Power Advisory	Real-Time Market	RTM is italicized but it is not included within the present Market Rules within Chapter 11 (Definitions) nor included within MR-00461-R01 – this re-occurs throughout multiple sections within MR-00455	Please see the response to Power Advisory 34.
43	Power Advisory	Market Control Entity	For needed clarity, a specific definition should be described and not just cross reference Chapter 7, some of the details proposed in the draft Section 22.9 could be moved to the definition	Please see response to Capital Power 64 with respect to level of detail in market rules and manuals.
44	Power Advisory	Notice of Disagreement	Can MPs utilize a Notice of Disagreement for any charges levied by IESO resulting from the MPM framework (e.g., settlement charges resulting from mitigating physical withholding)? If so, this definition requires cross references to applicable sections relating to the MPM framework.	A market participant may submit a Notice of Disagreement (NOD) for any settlement charge applied as a result of mitigation activities, including mitigation for physical withholding and economic withholding. Any required updates to the NOD market rules will come as part of the Settlement batch.
45	Power Advisory	14.1.2	BCAs should be added with applicable and sufficient details and information	Please see the response to Power Advisory 13.
46	Power Advisory	14.1.2.1	Make explicit that PCAs will be published by IESO at least on an annual basis	Please see the response to Power Advisory 30.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
47	Power Advisory	14.1.2.1.1	<p>Explicit details, data, and information should be listed within MM 14.1 and/or should be published on the IESO website for the following input data:</p> <ul style="list-style-type: none"> <li>• Congestion components of Locational Marginal Prices (LMPs) and congestion limits or thresholds towards determining PCAs</li> <li>• Sensitivity factors and generation shift factors (GSFs) of all applicable resources</li> <li>• All applicable operating security limits (OSLs)</li> <li>• Real-time five-minute historical binding data for transmission facilities and OSLs, outages, and GSFs for previous 365 days</li> <li>• List of expected material configuration changes to the IESO-Controlled Grid (ICG) relating to the subsequent 365 days on the congestion component of LMPs, sensitivity factors or GSFs and OSLs</li> </ul>	<p>The IESO currently publishes and plans to continue publishing the following information in the renewed market:</p> <ul style="list-style-type: none"> <li>• Transmission facilities in-service and on-planned-outage from day 0 to 34, including their operating limits; and</li> <li>• Day-ahead, pre-dispatch, and dispatch security constraints.</li> </ul> <p>The IESO is planning to begin publishing the following information in the renewed market:</p> <ul style="list-style-type: none"> <li>• Congestion components of day-ahead, pre-dispatch, and real-time LMPs; and</li> <li>• Shadow prices of real-time binding constraints (this is used to determine which real-time constraints bind).</li> </ul> <p>The following information is confidential and will not be published in the renewed market:</p> <ul style="list-style-type: none"> <li>• Sensitivity factors and generation shift factors (GSFs); and</li> <li>• Expected material configuration changes to the ICG.</li> </ul>
48	Power Advisory	14.1.2.1.2	Include examples of how IESO will methodologically determine PCAs	<p>The IESO has added additional content in section 2.1.2 of Market Manual 14.1 in response to this feedback. The additional content provides more information regarding the methodology for determining PCAs. Please also see the response to Power Advisory 30.</p>
49	Power Advisory	14.1.2.2.1	Include engineering equations to determine NCAs with a more detailed example than what has been provided	<p>The IESO has been unable to establish what is meant by “engineering equations” in this comment. As such, no additional content has been added to Market Manual 14.1 in response to this comment.</p>
50	Power Advisory	14.1.2.3.1	Regarding DCAs, same comment as within the above point (Section 2.2.1)	<p>Please see the response to Power Advisory 49.</p>
51	Power Advisory	14.2.2.1.2	<p>As specified in Section 2.1.1 and within the proposed draft rule amendments, default Reference Levels should be specified as an option regarding Non-Financial Dispatch Data parameters</p> <p>Present experience between renewable generators and IESO towards determining Reference Levels suggests more work needs to be done to provide clarity of process and options relating to selection of default parameters (e.g., ramp rates for wind and solar generators)</p>	<p>Default reference level values will provide the IESO with the ability to avoid certain reliability or adequacy issues related to participation of a particular resource. The IESO’s authority to set these default reference level values is an enabling feature of the market power mitigation framework that is intended to prevent delays in the process of registering reference levels from impacting the IESO’s ability to carry out its mandate. Default reference levels are not available upon request by a market participant. For more discussion of default reference levels, see the response to Power Advisory 22.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
52	Power Advisory	14.2.3	As stated within points made above, consistency is needed regarding whether MPs or IESO have the obligation to input data and information regarding Reference Levels and Reference Quantities as part of the facility registration process. For example, p. 8 states that "During the registration procedures as described in Market Manual 1.5, a market participant must submit information to support requested reference levels or reference quantities". This statement appears to contradict proposed draft rule amendments from MR-00455.	<p>Please see the response to Power Advisory 36.</p> <p>The market participant must submit various data to the IESO to assist it in determining a resource's reference levels, but the IESO is ultimately responsible for registering them. The IESO determines reference levels in consultation with each market participant as set out in section 3.13 of the Market Power Mitigation Detailed Design 2.0.</p> <p>Section 3 of Market Manual 14.2 provides details regarding the procedure to determine reference levels and reference quantities. Some topics covered in this section include: (i) what information can be provided by a market participant and (ii) how the procedure to establish reference levels is carried out.</p> <p>The tools to support the procedure are currently being developed. The IESO will publish documentation regarding these new tools that will explain how they function as part of the training materials that will be provided to support market participant readiness.</p>
53	Power Advisory	14.2.3.1; 14.2.3.2	Regarding forms of documentation MPs are required to submit to IESO to validate Reference Levels and Reference Quantities, original equipment manufacturer (OEM) data, information, and documentation may not always be accessible or still exist – this is proving to be the case for many hydroelectric generators that have been in operation for many decades; therefore, IESO must work with MPs towards more practical solutions where such OEM data, information, and documentation are not available simply due to the passage of time	Section 3.2 of Market Manual 14.2 provides information about the type of documentation that is acceptable. The market manual provides that this list is non-exhaustive and indicates that where documentation listed in the market manual is unavailable, documentation developed by the market participant may be submitted, which will be evaluated on a case-by-case basis by the IESO.
54	Power Advisory	14.2.5	Regarding hydroelectric generators and energy storage facilities with energy limited supply attributes, this section should specify the ability of these resources to request temporary Reference Level changes. Ultimately, offer prices should be used to indicate when energy from energy limited resources should be committed, scheduled, and dispatched during real-time hours and intervals when this energy (or operating reserve) is most required.	<p>Doing as requested would allow energy limited resources to circumvent mitigation by requesting temporary reference level changes to modify the opportunity cost component of their reference levels. Allowing offer prices to be used to indicate when energy limited resources should be committed, scheduled, and dispatched during real-time hours by granting requests to temporarily change reference levels in this manner would allow those resources to exercise market power on demand.</p> <p>Energy-limited resources have opportunity costs incorporated into their energy offer reference levels. These opportunity cost components are described in section 6.4 of Market Manual 14.2.</p> <p>If a resource's operational characteristics are such that an additional opportunity cost related to material amounts of foregone energy or operating reserve revenues is incurred that is not already reasonably addressed by the opportunity costs found in that section, a market participant may request an additional opportunity cost in the reference level submission for that resource. Section 6.4.1 of Market Manual 14.2 contains details on requesting additional opportunity costs.</p>



# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
55	Power Advisory	14.2.6.3.1	Building on points made under Chapter 3 above, the concept of the “expected design life of a resource” may not be extracted from OEM documentation considering such documentation may not exist due to the age of many hydroelectric generators; therefore, IESO must be amenable to working with these hydroelectric generators towards satisfactory solutions – further, it is noted that establishing a design life for many hydroelectric generators will require new studies (especially under the circumstance where original OEM documentation no longer exists) which will prolong timelines to finalize components (e.g., major maintenance costs, etc.) towards the finalization of facility-specific Reference Levels and will likely require lots of back and forth discussions with IESO	Please see the response to Power Advisory 53.
57	Power Advisory	14.2.6.7	Regarding opportunity costs relating to operating reserve, more details are required in addition to these costs being “based on incremental costs associated with posturing a resource to be able to provide additional energy”	<p>In general, costs that are eligible to be included in an operating reserve reference level are costs that increase when the supply of operating reserves increases.</p> <p>Section 6 of Market Manual 14.2 states:  <i>“Section 6 of Market Manual describes the cost components that are eligible to be included in a resources reference level cost calculation formulas ... Section 7 provides technology-specific guidelines regarding applicable cost components, formulas and supporting documentation required for different resource technology types.”</i></p> <p>Technology-specific details on operating reserve reference levels are provided in sections 7.1.10, 7.2.3, 7.6.1.4, and 7.7 of Market Manual 14.2.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
58	Power Advisory	14.2.7.2	Regarding hydroelectric generation, the long-term average energy calculation used to determine Gross Revenue Charges (GRC) needs more clarity as it is not clear why 10 years of a data is required and whether this calculation includes spilled amounts; it is not clear why there a historical threshold of 5 years is used to determine unscheduled maintenance costs that can be included in financial offers; while hydroelectric generators can adjust historical costs by inflation, it is not clear what is an appropriate index if the Consumer Price Index (CPI) index is not used; hydroelectric generators may want greater flexibility to modify their costs to account for changing/changed operational profiles (even though an equivalent operating hours calculation is specified)	<p>The response to this comment has been separated into 4 numbered items. The first three of these responses are consistent with sections 3.1 (Historical Study Period) and 3.2 (Supporting Documentation) in Market Manual 14.2:</p> <ol style="list-style-type: none"> <li>1. In regards to long term average energy: 10 years of data is used as a baseline to cover resource variability, but market participants may propose a longer duration. Gross Revenue Charges are based on Annual Energy, and therefore do not include spilled amounts. If there were major refurbishments or long term unplanned outages during any of the years which substantially affected energy generation, market participants may propose that these years be excluded from the calculation.</li> <li>2. In regards to unscheduled maintenance: 5 years of data is anticipated to be sufficient to determine historic trends for unscheduled maintenance costs, but market participants may propose a longer duration.</li> <li>3. In regards to indices: Various third party indices are available and applicable to different reference level components (e.g., USBR construction cost trends, ENR labour &amp; material indices, etc.). These may be applicable depending on the component is being applied to. Market participants must propose valid reasoning for using any index they chose to use.</li> <li>4. In regards to accounting for changing operational profiles: The equivalent operating hours approach described in section 7.2.2 of Market Manual 14.2 provides an optional correction factor for market participants to adjust historical maintenance costs to the current operating period. As such, it is possible for market participants to modulate the equivalent operating hours approach to ensure that the accounting for maintenance costs is consistent with current operational practices.</li> </ol> <p>Due to our frequent consultations, the MPM framework puts forward a practical, participant-centric, and made-in-Ontario approach to prevent the exercise of market power.</p>
59	Power Advisory	14.2.8.3	Building on points made under Chapter 3 above, the ramp-rate calculation for hydroelectric generators requires OEM documentation, which may not be available due to the age of many hydroelectric generators and there is a similar request for maximum number of starts per day, and in both cases hydroelectric generators should be able to provide alternate solutions with IESO regarding use of, and type of, historical data	Please see the response to Power Advisory 53.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
60	Power Advisory	14.2.8.4.1	Regarding ramp rates for solar generators, "supporting documentation" should be defined with examples of acceptable documentation listed	Section 8.4.1 of Market Manual 14.2 states that supporting documentation must "show the ramp rates (MW/min) for the resource across its dispatchable range." The IESO relies on the participant to submit documentation that meets this requirement and has flexibility built-in to the types of acceptable documentation. Section 3.2 of Market Manual 14.2 states: <i>"Where documentation from the above list is not available, documentation developed by the market participant may be submitted. This documentation will be evaluated on a case-by-case basis by the IESO."</i>
61	Power Advisory	14.2.8.5.1	Regarding ramp rates for wind generators, "supporting documentation" should be defined with examples of acceptable documentation listed	Similar to the above comment, section 8.5.1 of Market Manual 14.2 states that supporting documentation must "show the energy ramp rates (MW/min) for the resource across its dispatchable range. The IESO relies on the participant to submit documentation that meets this requirement and has flexibility built-in to the types of acceptable documentation. Section 3.2 of Market Manual 14.2 states: <i>"Where documentation from the above list is not available, documentation developed by the market participant may be submitted. This documentation will be evaluated on a case-by-case basis by the IESO."</i>
62	Power Advisory	14.2.8.7.1; 14.2.8.7.2	Regarding ramp rates for energy storage facilities, "supporting documentation" should be defined with examples of acceptable documentation listed	Similar to the above comment, section 8.7 of Market Manual 14.2 states that supporting documentation must show the ramp rates (MW/min) for the resource across its dispatchable range. The IESO relies on the participant to submit documentation that meets this requirement and has flexibility built-in to the types of acceptable documentation. Section 3.2 of Market Manual 14.2 states: <i>"Where documentation from the above list is not available, documentation developed by the market participant may be submitted. This documentation will be evaluated on a case-by-case basis by the IESO."</i>
63	Power Advisory	14.2.9.2	Regarding hydroelectric generators, Reference Quantities are based on the minimum head capability for each generation unit for a particular resource, but it is not clear how that minimum head capability will be quantified and whether it will be adjusted on a seasonal basis	Section 9.2 of Market Manual 14.2 has been updated in response to your feedback. The minimum head-based capability is not a seasonal parameter; however, per section 22.6.5, a market participant may request modifications to the default methodology for determining reference quantities for a particular resource.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
64	Capital Power	22.1.1; 22.4.2; 22.4.3	Methods for establishing reference levels should be in the Market Rules, not the Market Manuals.	The distribution of content between the market rules and manuals, and the level of detail included in those documents, will vary depending on the nature of a given requirement set out in a design document. The IESO has arrived at what it submits are reasonable expressions of the design requirements, both in respect of level of detail and distribution of content as between the market rules and manuals. We would invite further input with respect to reasons for concluding that the IESO's determinations in these regards are not reasonable. In this particular case, the IESO believes it is reasonable to have included resource specific details with respect to methods for establishing reference levels in the market manuals, as opposed to the market rules.
65	Capital Power	22.1.2	[This section] should be deleted. As drafted, the market participant is at risk for IESO failures to determine and register a reference level for the resource.	Section 22.1.2 requires resources that are subject to mitigation to have reference levels registered prior to participation in the energy or operating reserve markets. This provision is necessary to prevent the market power mitigation framework being circumvented in cases where market participants decline to submit supporting information required to register reference levels. In the event that there is a failure to determine and register reference levels, the IESO may register the default reference levels contemplated in section 22.3.2. in order to support reliability and adequacy and to ensure that a resource is able to participate in the energy and operating reserve markets.
66	Capital Power	22.1.3	[This section] permits far too broad an information request. It places undue burden on the market participant, while alleviating the IESO of its role in adequately and reasonably scoping information requests to support the establishment of reference levels. The market participant should not be required to provide information the IESO may require, only information the IESO actually and reasonably requires. More consideration needs to be given to how the Market Rules should scope the type of information reasonably required by the IESO to establish reference levels.	Section 22.1.3 has been updated in response to your feedback. Section 3.2 of Market Manual 14.2 provides a list of documentation that may support a requested reference level. The IESO will ask for additional information not listed in this section if such information is necessary to support a reference level requested by a market participant. Due to the unique characteristic of each resource, the type of information required to support a particular reference level may be unique.
67	Capital Power	22.1.4	[This section] should be revised to require the IESO's to make reference levels available to the market participant in accordance with the Market Rules, not the market manuals.	Please see response to Capital Power 64 with respect to the allocation of content as between the market rules and manuals
68	Capital Power	22.2.2	It is not clear why this amendment is required. If a market participant offers below its reference level, does it face any risk of being mitigated? Can the IESO provide additional detail on the purpose of this amendment?	Section 22.2.2 of Chapter 7 gives the IESO the ability to register reference levels that are below the short-run marginal costs of a resource at the request of the market participant. Absent this ability, the IESO would be obligated to establish the reference levels that are consistent with a resource's short-run marginal costs (per section 22.2.2) even if the market participant for that resource desired to register a reference level below that short-run marginal cost. This rule provision is intended to alleviate the administrative burden on market participants. If a market participant's energy offer is entirely below its reference level, there is no risk of mitigating the energy offer as the conduct test will not fail.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
69	Capital Power	22.2.3; 22.3.1.9	[These sections] should be deleted. As drafted these proposed amendments would foreseeably cause unnecessary harm to the market, and they appear to be drafted so as to permit punitive actions against a market participant in retaliation for a legitimate, though protracted, dispute with the IESO. As addressed above, it is unreasonable for rules to force a market participant to provide any information the IESO may require, yet this section would permit the IESO to register a value of \$0 if the market participant disagrees with the scope of the IESO's information request. This drafting is inconsistent with the purpose of the market power mitigation design, particularly when once considers that the IESO has numerous other types of information it may consider when establishing default reference levels.	Market participants must support requested reference levels with documentation that demonstrates a resource's short-run marginal costs. Market Manual 14.2 outlines and limits the documentation that will support a requested reference level. The market manual also states that where documentation is not available, documentation developed by the market participant may be submitted. This documentation will be evaluated on a case-by-case basis by the IESO. With respect to information that the IESO may require to determine a resource's reference levels, please see the response to Capital Power 66. With respect to why the IESO requires the ability to register default reference levels, please see the response to Power Advisory 22. In addition, the referenced sections have been changed from an obligation to register default reference levels and reference quantities to a discretionary power to do so.
70	Capital Power	22.5.2; 22.7.2	[These sections] should be re-drafted to permit revisions under such circumstances following consultation and agreement with the market participant.	Section 3.4 of Market Manual 14.2 describes the procedure that the IESO will initiate in order to update reference levels or reference quantities under sections 22.5.2 or 22.7.2 of Chapter 7. This procedure involves consultation with the market participate to determine appropriate reference levels and reference quantities. Reference levels and reference quantities must be determined consistent with the relevant provisions in Chapter 7 and with Market Manual 14.2.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
71	Capital Power	22.8	<p>This section, taken with the rest of the proposed amendments could result in prejudice to the market participant. It permits the IESO, through delay (even if unintentional) to prevent/limit the market participant’s participation in the market. If finalized, these amendments would permit the IESO to provide its preliminary view to the market participant in accordance with a timeline insufficient for the participant to review, respond, and request an independent review. The proposed amendments also place no obligation on the IESO to communicate a request to proposals to consultants in a timely manner, thereby risking further delay and harm to the participant and the market.</p> <p>The drafting of 22.8 is of serious and significant concern. It should be subjected to further consultation. In the event that this request for further consultation is denied, Capital Power is interested to understand why the IESO considers these amendments to be consistent with detailed design considerations and would result in unfairly prejudicing market participants. The market participant should not be charged the cost of the independent reviewer, since the market participant has no control over the managing the scope and work of the independent reviewer. It is understood and reasonable that the IESO wants to guard against the possibility that market participants will file unnecessary or frivolous requests for an independent review, but the cost must be appropriately and fairly balanced between the IESO and the market participant.</p>	<p>The timelines for the independent review process are set out in proposed Market Manual 14.2. The market participant has 11 business days to review the reference levels and reference quantities communicated in a preliminary view and request an independent review (section 3.3.3). If the market participant requests an independent review, the IESO must solicit a request for proposals from independent consultants within five business days of the request (section 3.5.1). The IESO believes these timelines are reasonable.</p> <p>With respect to the question of costs for the independent reviewer, the IESO notes that the independent review process is an optional mechanism for participants who are unsatisfied with the IESO’s preliminary view of a references level or reference quantity. In the event a market participant exercises its discretion to access the independent review process, that market participant will determine the issues to be reviewed and thus will determine the scope of the independent review itself. The market participant will be provided with a cost estimate from the independent consultant before the consultant conducts the review and will have the option to decline all or part of the review (proposed market rule amendment Chapter 7, section 22.8.4). The MP has five business days to decide whether to proceed with all or part of the review after receiving the cost estimate. Given that this is a mechanism participants are electing to access, and given their role in setting the scope, the IESO believe it is reasonable for participants to bear associated costs.</p> <p>Similarly, In the event the IESO rejects a finding of an independent reviewer for one of the reasons set out in section 22.8.7., the IESO will bear the cost of subsequent reviews.</p>
72	Capital Power	22.9.1	<p>Could the IESO provide an example of persons or entities that own, directly or indirectly, whether through subsidiaries or otherwise, voting securities carrying more than 10% of the voting rights of the market participant where the market participant’s parent company is a publicly listed (TSX or NYSE) company? Are the proposed amendments intended to capture shareholders in the publicly listed parent?</p>	<p>The IESO is not aware of, and cannot provide an example of, details surrounding ownership of publicly listed companies; however, we can confirm that the market control entity disclosure requirements are intended to include publicly listed entities and individuals that meet the criteria in the market rules.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
73	Capital Power	22.10	The definitions and methodologies used to calculate Broad Constrained Areas should be included in this section. All constrained areas, Potential, Broad and Narrow, should be published on, at minimum, an annual basis. The rules should specify the schedule/regularity with which constrained areas are published by the IESO.	With respect to broad constrained areas, please see the response to Power Advisory 29. Because broad constrained areas are determined by each run of the calculation engine, there is no way to publish broad constrained areas in advance. With respect to potential constrained areas, please see the responses to Power Advisory 30 and 46. Section 2.2.2. of Market Manual 14.1 states that NCA designations will be published annually. Per section 2.3 of Market Manual 14.1, DCA designations are determined on a rolling basis based on outcomes in the day-ahead and pre-dispatch calculation engines. As DCAs are determined on a rolling basis, DCAs cannot be published on an annual basis. Per section 2.3.2 of Market Manual 14.1, DCA designations will be published on a rolling basis at least 4 hours before they come into effect.
74	Capital Power	22.10.2.3	Material configuration changes should be a defined term, as it is unclear what this means, and therefore what would trigger an update to the list of resources in a narrow constrained area.	Market rule section 22.10.2.3 and section 2.2.2 of Market Manual 14.1 have been changed in response to your feedback.
75	Capital Power	22.13.1	How does a market participant ensure that bona fide restrictions on operating conditions/capabilities are considered by the IESO when reviewing dispatch data? Does outage information override dispatch data? Or is dispatch data expected to reflect outage conditions/operating restrictions?	Ex-ante validation of non-financial dispatch data involves comparing submitted dispatch data to a resource's reference levels. Submitted dispatch data that exceeds the relevant reference level by more than the applicable threshold set out in section 22.13.1 will be rejected. Bona fide restrictions on operating conditions/capabilities are considered because non-financial reference levels are set based on the operational characteristics of a particular resource. The conduct test will only be failed when a market participant submits dispatch data that varies significantly (by more than the conduct threshold) from the relevant resource's operating restrictions that are reflected in the relevant non-financial reference level. Outage information will not result in failing validation of non-financial dispatch data parameters. For market participant obligations regarding submitting dispatch data, please see Chapter 7.
76	Capital Power	2.5.1A.6	For reasons set out in comments relating to 22.8, and to ensure that disputes related to reference level discussions are resolved in a manner that does not prejudice the market participant, result in harm to competition, or distort the market, this section should be revised to facilitate the timely resolution of disputes between the market participant and the IESO. Is it the IESO's intent that 2.5.1A.6 only be used in the event (i) an independent review has been concluded, and (ii) the IESO has then registered reference level values for the participant that may or may not reflect the findings of the independent reviewer? If so, Capital Power recommends revising this section or the dispute resolution framework more broadly, to ensure the fair and timely resolution of disputes that facilitate ongoing participation in the market.	This section has been revised in response to your feedback. Please also see the response to Power Advisory 19.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
78	Ontario Power Generation (OPG)	22.3.1.1-22.3.1.2	OPG suggests the term "ramp rate" be italicized in the terms "energy ramp rate reference level" and "operating reserve ramp rate reference level". Without italics, the language is inconsistent with the fact that similar terms, such as "energy offer reference level" and "operating reserve offer reference level" are defined terms.	Defined terms have been added for each of the reference levels for non-financial dispatch data parameters set out in section 22.3 in response to this comment.
79	OPG	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.	Default reference level values will provide the IESO with the ability to avoid certain reliability or adequacy issues related to participation of a particular resource. The IESO's authority to set these default reference level values is an enabling feature of the market power mitigation framework that is intended to prevent delays in the process of registering reference levels from impacting the IESO's ability to carry out its mandate. Default reference levels are not available upon request by a market participant. For more discussion of default reference levels, see the response to Power Advisory 22. Section 22.3.2 has been updated in response to your feedback.
80	OPG	22.3.2.10	The section provides the default value for maximum energy per ramp hour reference level as "MWh multiplied by the resource's minimum loading point reference level". Which MWh value does this refer to? As written, the clause is incomplete.	Section 22.3.2.10 has been updated in response to your feedback.



ID	Stakeholder	Section or Manual	Feedback	IESO Response
81	OPG	22.4.3	<p>This section does not align with the Detailed Design. Section 3.13.1.2 (second paragraph under “Dual-Fuel Resource Treatment”) states that:  <i>“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...”</i></p> <p>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.</p>	<p>The text directly following the quoted section of the detailed design document shows that section 22.4.3 is aligned with the detailed design.</p> <p>The quoted section reads:  <i>“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 - one for each fuel type selected by the market participant during the registration process.”</i></p> <p>The detailed design states that a market participant may indicate a primary and a secondary fuel type for their resource. It also indicates that a market participant may establish one set of reference levels for each fuel type selected. These facts necessarily limit the sets of reference levels that a dual-fuel resource can request to two, as a resource can only establish two fuel types (a primary and a secondary).</p> <p>In response to stakeholder input during reference level consultations, the IESO has broadened the eligibility to have two sets of reference levels so that it is available consistent with section 22.4.</p> <p>The type of configuration indicated in the comment is not specifically accounted for in the market power mitigation framework. Section 5 of Market Manual 14.2 and the relevant market rule provisions detail the ability of a market participant to request the use of a higher-cost profile when they are unable to operate according to the lower cost profile. Resources may be able to operate in a multitude of configurations, but this is not a principled reason to set a reference level consistent with the operating configuration requested by a market participant. To do so would allow market participants to circumvent the market power mitigation framework by electing to use expensive operating configurations as the basis to set the relevant reference level.</p> <p>During reference level consultations, the IESO consults with market participants to determine reference levels that are consistent with the short-run marginal costs of providing incremental supply of energy or operating reserve. If a particular resource has operational restrictions that prevent certain configurations, those configurations will not form the basis of the resource's reference levels.</p>
82	OPG	22.5	<p>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.</p>	<p>The process outlined in section 3.4 of market manual 14.2 (updates to reference levels or reference quantities initiated by the IESO) includes issuance of the preliminary view report to the market participant.</p> <p>The IESO will provide the preliminary view report to the market participant as part of the process to change reference levels pursuant to section 22.5 or section 22.7.</p> <p>The IESO has added a new section (22.5.12) in response to this comment to clarify this obligation in response to your comment.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
83	OPG	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.	Please see the response to OPG 82.
84	OPG	22.5.3	<p>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.</p> <p>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.</p>	<p>The example discussed considers a scenario where the DAM schedule was given from Day-0 and from Day-1. The scenario captures correctly that the DAM engine in Day-1 won’t respect the MGBDT from Day-0 and can schedule the resource earlier than what it should be if the MGBDT was considered overnight. This is why the DAM Day-0 commitment ended at 22:00, where the DAM Day-1 commitment started at hour 1:00. However, when the PD engine runs at hour 20:00, the PD engine look-ahead period will consider Day-1 and the commitments will be inherited from DAM. In this case, the PD engine will solve in a way that respects the MGBDT constraints or the solution of the optimization problem will be infeasible. In order to respect the MGBDT, it is anticipated that the PD engine will bridge the commitment from DAM Day-0 and DAM Day-1 (i.e. the PD engine will keep the resource committed between 22:00 and 1:00). There are no costs incurred to achieve this outcome, so no changes to reference levels are warranted.</p> <p>The IESO notes that there is a timing problem that renders the requested change impossible. In the scenario described, the market participant requests that the day ahead market start up cost reference level for Day-1 accounts for purported costs which cannot be known until after the day ahead market has completed for Day-1. Even if there were costs incurred, it would be impossible for the day ahead start up offer reference level for Day-1 to include them.</p>
85	OPG	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.	Higher cost profile refers to financial reference levels. Non-financial reference levels will be set based on operational capability of the resource. Where the resource could have different operational capability depending on the configuration of the resource, the IESO will set the non-financial reference level based on the most permissive value that could occur for a possible configuration.
86	OPG	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.	Section 22.5.6 has been updated in response to your feedback.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
87	OPG	22.5.10.3	<p>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:</p> <p><i>"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"</i></p> <p>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.</p> <p>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?</p>	<p>Sections 22.5.10.3 and 22.5.10.4 have been updated in response to your feedback.</p> <p>This rule disincentives market participants from submitting requests for higher reference levels that are not factually supported. Absent this provision, this process would not contain any controls to disincentive market participants from circumventing the market power mitigation framework by unilaterally increasing their reference level values.</p> <p>Even when the criteria in this section are met, market participants are still able to submit requests for temporary reference level changes within business hours. Nothing in this procedure otherwise restricts market participants from submitting notices of disagreements should the IESO settle the market participant using incorrect inputs.</p>
88	OPG	22.5.11	<p>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.</p>	<p>Market participants are aware of the informational requirements when they submit requests for use of a higher cost reference level profile. As a result, the IESO anticipates that allowing two business days is sufficient preparation time. Keeping the duration to two business days supports the efficient resolution of these matters, avoiding unnecessary delays.</p>
89	OPG	22.6.5	<p>OPG suggests the following revision to this section:</p> <p><i>"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."</i></p> <p>The definition of "reference quantity" is "an IESO-determined formula to calculate a reference quantity value." Since the reference quantity is a formula, the phrase "methodology used to calculate reference quantities" is redundant.</p>	<p>Section 22.6.5 has been updated in response to your feedback.</p>
90	OPG	22.6.7.2	<p>This section refers to "maximum installed capacity". The term should either be defined in Chapter 11 or replaced with a term already defined.</p>	<p>This section has been updated in response to your feedback.</p>
91	OPG	22.8.2	<p>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.</p> <p>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>..."</p> <p>Finally, MPs should have the opportunity to approve or disapprove of the IESO's selection of consultant for the process.</p>	<p>Section 22.8.2 has been updated in response to your feedback.</p> <p>When selecting a consultant, the IESO must adhere to the requirements for "Other Included Entities" in the Ontario Public Service Procurement Directive, which includes requirements regarding declaring conflicts of interest and permitting the IESO to select only the highest ranked submission that met all mandatory requirements set out in the procurement document.</p> <p>Due to the potential for misaligned incentives, market participants cannot approve or disapprove the selection of the consultant, but will have the option to decide not to proceed with an independent review per sections 22.8.4 and 22.8.9.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
92	OPG	22.8.9	<p>Please clarify the following scenario: 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.</p> <p>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.</p>	<p>Section 22.8.9 has been drafted to allow market participants that have requested a review of multiple reference levels and/or reference quantities to discontinue the review process with respect to a particular reference level or reference quantity without requiring that the market participant do so for all reference levels or reference quantities for which the review was requested.</p> <p>With respect to the proposed scenario: The IESO would be required to register reference levels or reference quantities consistent with the findings of the independent reviewer's report that were not rejected and the review process would then be conducted again for the rejected finding (sections 22.8.7 and 22.8.8). The market participant then requests that the review process be discontinued (section 22.8.9) and the IESO registers the relevant reference level or reference quantity as set out in the preliminary view (section 22.8.9).</p>
93	OPG	22.8.11	<p>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.</p>	<p>Section 22.8.4 requires the IESO to provide the market participant requesting an independent review with the estimated cost of the review. Section 3.5.1 of Market Manual 14.2 sets out the timelines associated with retaining an independent consultant and the cost estimate.</p>
94	OPG	22.9	<p>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.</p>	<p>A market control entity for physical withholding does not require direct control over offer behaviour. The market control entity for physical withholding identifies occasions where a common parent entity benefits from the actions of other corporate entities. Even absent control, the parent entity is beneficially impacted by increases in revenues associated with exercises of market power of the other corporate entities. Creating an exception for corporate entities that do not have the ability to directly influence market participant behaviour could create incentives for market participants to structure corporate ownership so as to qualify for these exceptions to circumvent the market power mitigation framework.</p>
95	OPG	22.9.3	<p>The word "the" should not be italicized: "A <i>market participant</i> shall designate <i>market control entities</i> and <del>the</del> <i>the market control entity for physical withholding</i> for a <i>resource</i> in accordance with the applicable <i>market manual</i>."</p>	<p>Section 22.9.3 has been updated in response to your feedback.</p>
96	OPG	22.12.3	<p>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.</p>	<p>The different timelines reflect the risk of the exercise of market power.</p> <p>An intertie zone is designated as uncompetitive when competition is restricted on the intertie zone and, as such, there is a risk of the exercise of market power. A two business day lag between designation and the designation taking effect is the shortest reasonable amount of time that the IESO could allow in order to minimize the opportunity for the exercise of market power.</p> <p>Designation of global market power reference intertie zones does not create a similar risk and so a longer time period between designation and the designation taking effect is appropriate.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
97	OPG	22.13	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.	The IESO has drafted the thresholds and tests based on the Market Power Mitigation detailed design. The IESO does not agree that the language needs to be edited.
98	OPG	22.15	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.	The IESO intends to review the performance of the market power mitigation framework in the renewed market. Any changes required to ensure it is supporting efficient market outcomes will be made through the market rule amendment process. In regards to the \$25/MWh threshold, this value was not set based on factors directly related to contemporaneous natural gas prices. The \$25/MWh threshold is a measure of materiality that is consistent with US jurisdictions. This value is also aligned with historical price data from Ontario. The detailed design feedback and response on this issue can be found in IESO responses to stakeholder feedback on detailed design, comment 175, found here: <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/mrp-edd/edd-20201019-response-to-stakeholder-feedback.ashx</a> .
99	OPG	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.	The IESO will notify stakeholders when these appendices are ready for their review.
100	OPG	22.15.4	The section contains a typo. The following correction should be made: "The IESO may apply a conduct test for <i>physical withholding</i> to an <i>energy offer</i> of a <i>registered market participant</i> for a <i>resource</i> that meets the requirements set out in..."	Section 22.15.4 has been updated in response to your feedback.
101	OPG	22.15.4	The subsections 22.15.4.1.1-2 and 22.15.4.2.1-2 contain the clause "...that <i>registered market participant</i> for a <i>resource</i> ..." 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 <i>register market participant</i> for <i>the resource</i> ..."	These sections contained typographical errors and have been updated in response to your feedback.
102	OPG	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).	The conduct threshold that the comment identifies is applied when a resource is located within an NCA or DCA that was binding. In this circumstance, the resource has significant market power and it is appropriate that the conduct threshold is relatively restrictive. In order to reach a finding of physical withholding for a resource, that resource has to have been found to have a price impact. In the event that a resource fails the conduct test but the MW quantities are insufficient to move the LMP at that resource significantly, there is no finding of physical withholding and no settlement charge.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
103	OPG	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.	Section 5.8 of Market Manual 14.1 permits a market participant to submit documentation to support a request for the use of an alternate reference quantity. Market participants have the ability in this process to provide whatever information they deem relevant for the IESO's consideration, including ancillary service out of service slips. This documentation may include any resource-specific conditions that were not accounted for in the registered energy or operating reserve reference quantity.
104	OPG	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.	The issuance of a second notice of physical withholding may result in a settlement charge, following which market participants may use the notice of disagreement process. Cross references are not required for the notice of disagreement process to apply.
105	OPG	22.16.2	The section states that two different sets of <i>intertie reference levels</i> are produced (one for business days and one for all other times). Please explain how the calculations will differ between the two sets of <i>intertie reference levels</i> . OPG also suggests that <i>intertie reference levels</i> should have an hourly granularity as market dynamics change over the course of a given day.	Section 22.16.2 has been updated in response to your feedback.
106	OPG	22.16.4	OPG interprets this section to state that if a market participant does not meet the conditions in 22.16.3, the <i>DAM energy offer intertie reference level</i> will be equal to the <i>intertie border price</i> for energy from the <i>DAM</i> . Since <i>intertie border prices</i> for <i>energy</i> from the <i>DAM</i> are not available until after the close of the <i>DAM</i> , 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.	OPG's understanding of section 22.16.3 is correct. When market participants have not been scheduled on a particular intertie resource in 15 of the previous 90 days, their intertie reference level will be the Intertie Border Price, which is based on contemporaneous market conditions. Market participants can identify when this is the case as they are preparing to submit their dispatch data. They can prepare supporting materials that describe the relevant market conditions as they see fit that can be provided to the IESO in accordance with section 6.3 of Market Manual Part 14.1 if they receive a first notice of physical withholding for that intertie transaction.
107	OPG	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.	As specified in Section 22.16.3, energy offers or bids in the 90 days prior to the dispatch day will be used to calculate this average. The current language of section 22.16.5 cross references section 22.16.3, so no changes to the market rules or market manuals are required.
108	OPG	22.16.6	Section 22.16.6.3 is mislabelled as "22.16.3.3".	This section has been updated in response to your feedback.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
109	OPG	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 <b>above</b> the intertie border price. OPG suggests removing section 22.16.9.3. Similarly, section 22.16.12.3 should be removed.	Sections 22.16.9.3 and 22.16.12.3 have been updated in response to your feedback.
110	OPG	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.”	Section 22.17.6 has been updated in response to your feedback.
111	OPG	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 <b>the lesser of</b> 100% or \$50/MW above the simulated intertie reference level energy LMP in the real-time market.	Section 22.17.7 has been updated in response to your feedback.
112	OPG	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 charge</i> for each <i>instance of intertie economic withholding</i> in accordance with the applicable <i>market manual</i> .”	Failures of the impact test set out in section 22.17.6 are addressed in sections 22.19. Section 22.19.7 permits the IESO to apply a settlement charge to resources that failed the impact test applied pursuant to section 22.17.6.
113	OPG	Global market power reference intertie zone	OPG suggests that a more direct definition of global market power reference intertie zone 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.	This definition has been updated in response to your feedback.
114	OPG	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.	This definition has been updated in response to your feedback.

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
115	OPG	Reference level & Reference quantity	Both reference level and reference quantity 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?	The IESO is developing the way in which registered data will be made visible to market participants. Information about how and what registered data will be made visible to market participants will be shared after the required incremental development of the registration system is further advanced. In regards to head-based capabilities, the market participant will request the reference quantities that will be registered for a resource. This means that market participants will have full visibility into this data that they are providing to the IESO.
116	OPG	simulated as-offered energy locational marginal price (LMP) & simulated reference quantity energy LMP	These two terms have exactly the same definition: <i>"means the energy locational marginal price produced by simulating the day-ahead market or real-time market, as applicable"</i> OPG suggests refining the definitions based on the purpose of each term.	These definitions have been updated in response to this feedback.
117	OPG	14.1.2.2.1	Section 2.2.1 explains the designation of "import constrained" for the real-time market, but not for the DAM: <i>"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."</i> Please explain how a potential constrained area is considered import constrained in the DAM.	Section 2.2.1 of Market Manual 14.2 has been updated in response to your feedback.
118	OPG	14.1.4.1	The section states: <i>"The IESO may modify and evaluate the designation of global market power reference intertie zones when:</i> ... <i>there is a material change in the amount of electricity trade that an existing intertie zone can accommodate"</i> 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.	These changes include installation of new facilities, upgrades of existing facilities, or decommissioning or removal of existing facilities rather than changes in flows that occur hour to hour. As these changes relate to large-scale capital decisions, the IESO anticipates them to be relatively infrequent.
119	OPG	14.1.4.2	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.	Section 4.2 of Market Manual 14.1 has been updated in response to your feedback.



# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
120	OPG	14.1.5.1	<p>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).</p> <p>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.</p> <p>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.</p>	<p>In regards to the 180-day period: this period creates a limit, not a delay. It prevents the IESO from submitting a first notice more than 180 days following a dispatch day. Section 22.15.20 of Chapter 7 states that market participants have up to 45 days following receiving a first notice to provide supplemental information regarding a resource's reference quantity.</p> <p>In regards to the persistence multiplier, market participants will know the reference quantity values for a resource for each dispatch day and will also know what offer quantities they submitted to the market. They also know the conduct thresholds that are found in the market power mitigation framework. Integrating this information, market participants can assess their own behaviour to determine their risk of failing the conduct test.</p> <p>In addition, section 5.7.3 of Market Manual 14.2 states "the persistence multiplier starts at a value of 1 and increases by 1 for each additional <b>second notice</b> issued." As the persistence multiplier is based on issued second notices, the market participant will be fully aware of any previous cases when submitting dispatch data for a particular dispatch day.</p> <p>In regards to the cadence of issuance of first notices for physical withholding, the IESO will retain the flexibility to issue first notices at the time that they are ready rather than delaying issuance to coincide with other reporting timelines. Such delays would slow down the process of assessing physical withholding and make the process less efficient.</p>
121	OPG	14.1.5.1	<p>Market Rules Ch. 7 s.22.15.22 states:  <i>"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."</i></p> <p>This potential outcome should be highlighted in Figure 5-1. Currently, the only outcome shown is "IESO to send second notice".</p>	<p>Discontinuing a process is not part of the process itself and so was not included in Figure 5-1. Further, the following text appears directly below Figure 5-1, in section 5.1 of Market Manual 14.1:  <i>"If the IESO discontinues an assessment after sending a first notice to the market participant the IESO will notify the market participant of the discontinuation."</i></p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
122	OPG	14.1.5.4	<p>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?</p> <p>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.</p> <p>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.</p>	<p>In regards to the process for informing market participants of failures of conduct and impact tests, per section 22.15 the IESO will only issue a first notice of physical withholding if a market participant has met the conditions to be tested, failed the conduct test and has failed the impact test. There is no notification related solely to meeting the conditions to be tested for physical withholding or failing the conduct test. Further information on reporting will be communicated to market participants once development of the relevant business requirements has been further advanced.</p> <p>Market participants will know the reference quantity values for a resource for each dispatch day and will also know what offer quantities they submitted to the market. They also know the conduct thresholds that are found in the market power mitigation framework. By integrating this information, market participants can assess their own behaviour to determine their risk of failing the conduct test.</p> <p>First notices of physical withholding and second notices of physical withholding are confidential information and thus will only be provided to the market participant of the relevant resource. The IESO will structure the form and content of these notices to ensure that it does not share confidential information inappropriately.</p>
123	OPG	14.1.5.7.1 & 14.1.5.7.2	<p>The equations in these sections refer to a term "MWhs Failed." Please define this term, or specify how it is calculated.</p>	<p>The IESO has amended sections 5.7.1 and 5.7.2 of Market Manual 14.1 in response to this feedback.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
124	OPG	14.1.5.7.3	Please clarify how persistence multipliers are updated following an MP's 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.	<p>Persistence multipliers are calculated when the IESO issues a first or second notice of physical withholding. The IESO applies the methodology outlined in section 5.7.3 at the time the notice is created to determine the persistence multiplier that appears in the notice. The multiplier will be calculated to equal 1 when there were no prior second notices issued in the prior 18 months. Market Manual 14.1 describes calculation of the persistence multiplier in detail, including illustrative scenarios.</p> <p>Section 5.7.3 states:  <i>"calculation of the persistence multiplier excludes instances when a settlement charge resulting from an instance of physical withholding is reversed as a result of a notice of disagreement."</i></p> <p>Where a previously issued settlement charge for an instance of physical withholding is reversed as a result of a notice of disagreement, a market participant may submit a further notice of disagreement if there are other settlement charges that the initial notice of disagreement rendered incorrect after the fact.</p> <p>The physical withholding process allows for a market participant to request the use of an alternate reference quantity for a particular assessment prior to the issuance of a second notice. The assessment of physical withholding always includes this consultative step with the market participant, which mitigates the risk of the outlined scenario occurring.</p> <p>Given the fact that the risk of this scenario occurring is mitigated via inclusion of the consultative step in the process and that the existing notice of disagreement and dispute resolution processes provide recourse to market participants, there is no need for an additional IESO-driven automatic recalculation to address this scenario.</p>
125	OPG	14.2.2.1	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.	The market power mitigation framework already accounts for intra-seasonal variability with regards to reference levels with sufficient granularity. The IESO accounts for occasions where inputs into reference levels vary over a season as part of reference level consultations. In addition, conduct thresholds provide additional flexibility to account for incremental changes in ambient conditions.
126	OPG	14.2.5	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.	<p>The IESO looks forward to working with OPG on this topic as part of the reference level consultations and resolving any perceived barriers or obstacles through those discussions.</p> <p>Section 22.5.6 of Chapter 7 states the form and content of the documentation that is needed to be provided to request use of the higher cost fuel type is set by the IESO and the market participant. Importantly, the market participant has agency in setting this documentation.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
127	OPG	14.2.5.1; 22.5.7.2	<p>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:</p> <p><i>“...for the real-time market, no later than 130 minutes before the first dispatch hour in the request.”</i></p> <p>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.</p>	<p>Section 22.5.7.2 has been updated in response to your feedback regarding timeline alignment.</p> <p>The market power mitigation framework already provides market participants with the ability to include multiple dispatch hours in a single request. Section 22.5.5 of Chapter 7 states: “A market participant may, in accordance with the applicable market manual, request a temporary revision to the fuel cost component for specific <b>dispatch hours</b>.” A single request can cover multiple dispatch hours.</p> <p>In regards to deadlines for requests, section 22.5.7.2 states that requests must be submitted “for the real-time market, no later than 150 minutes <b>before the first dispatch hour in the request</b>.” The single deadline applies to the first hour in the request, but does not apply separately for each dispatch hour.</p> <p>Regarding acceptance of supporting materials, a single document can support multiple dispatch hours in a single request where appropriate. Per section 22.5.9 of Chapter 7, the IESO reviews submitted supporting documentation to assess whether the documentation demonstrates that the fuel cost component of a resource's reference levels will not reflect the short-run marginal costs of the resource. There is no requirement that a separate supporting document be submitted for each dispatch hour in the request.</p>
128	OPG	14.2.5.1	<p>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.</p>	<p>Please see the IESO's response to OPG 88.</p>
129	OPG	Market Manual 1.5, s. 3.3.5.2	<p>The manual defines the Maximum Generator Capacity (MGC) as follows:</p> <p><i>“MGC is the pseudo-unit maximum generator capacity as determined by the IESO”.</i></p> <p>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.</p> <p>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.</p>	<p>These changes to Market Manual 1.5 in the redline version provided in the market power mitigation batch that were the subject of this comment were not related to the market power mitigation batch and were included in error.</p> <p>The IESO also notes that the words in this section in the version presented in the market power mitigation changes were not updated by the market power mitigation batch. The only change shown in the redline was italicizing the term “minimum-loading point” in the first bullet in the list and a slight change to formatting of the bullets.</p> <p>In addition, this content has been superseded by the current version of Market Manual 1.5, found here: <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/Market-Rules-and-Manuals-Library/market-manuals/connecting/market-registration.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/Market-Rules-and-Manuals-Library/market-manuals/connecting/market-registration.ashx</a></p> <p>The content that is the subject of this comment was modified in the current version of Market Manual 1.5 and does not contain a section 3.3.5.2.</p>

# IESO Response to Feedback on MRP Draft Market Rules and Market Manuals – Market Power Mitigation



ID	Stakeholder	Section or Manual	Feedback	IESO Response
130	OPG	Market Manual 1.5, 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.	Table 3-2 of Market Manual 1.5 has been updated in response to your feedback.
131	OPG	General	<p>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.</p> <p>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.</p>	<p>The IESO’s commitment to stakeholder engagement, especially during MRP, has been to consult with stakeholders as early in the process as practical, to provide fair warning for processes or discussions that may take time.</p> <p>Section 3 of Market Manual 14.2 explains the process that the IESO will use to determine reference levels and reference quantities. An integral part of this process is two-way consultations with market participants. This market manual contains significant content related to these consultations:</p> <ul style="list-style-type: none"> <li>• section 3.2, in regards to documentation that market participants provide to support a requested reference level;</li> <li>• section 3.3, which contemplates a market participant initiating the process (and necessarily being able to provide input into the process); and</li> <li>• section 3.4, which contemplates the IESO initiating the process and requires the IESO to request information as required and issue the preliminary view to the market participant (section 3.4.2) as well as making the independent review available to the market participant whenever a reference level or reference quantity is determined (section 3.5).</li> </ul> <p>As indicated in stakeholder engagement sessions, the IESO will continue to update the market power mitigation batch documents in subsequent batches to reflect incremental changes, including those that result from future reference level consultations.</p>