

**BY EMAIL**



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**Re: H2O Power Comments and Observations on Market Power Mitigation**

Dear Marc,

In response to your letter dated March 16, 2022, attached are the IESO's responses to your questions and comments resulting from the February 15 presentation to the Technical Panel on market power mitigation (MPM).

The stakeholder comment period on the MPM market rule amendments was reopened for an additional two weeks following the February 15 Technical Panel meeting so that stakeholder comments could be informed by the MPM scenarios discussion. Stakeholder comments along with the IESO's responses were shared with the Technical Panel and posted on the IESO website earlier this week.

For the March 22 Technical Panel meeting, the IESO is recommending that the Technical Panel vote to provisionally recommend the proposed MPM market rule amendments. As part of that discussion, the Technical Panel will be reviewing the written stakeholder feedback and IESO responses. For completeness, and subject to H2O's agreement, the IESO is proposing to share H2O Power's comments and IESO responses with the Technical Panel for their discussion on March 22.

The IESO appreciates H2O Power's ongoing engagement with the MPM team who would be happy to meet with you if you would like to have further discussion or need further clarification on our responses.

Regards,

  
Jessica Savage

Program Delivery Executive, Market Renewal Program  
IESO

CC:

Stephen Sommerville, H2O Power Holding LP

Jim Gartshore, H2O Power Holding LP

Jason Chee-Aloy, Power Advisory LLC

Michael Killeavy, Power Advisory LLC

Paul Norris, Ontario Waterpower Association

Lynn Wizniak, OPG

Michael Mosco, Evolugen

## H2O Power Feedback

ID #	Market Participant	Section	Comment	Response
103	H2O Power	n/a	<p>In the slides dealing with Constrained Areas, the pictorial depiction implies that constraints are unidirectional. However, there are several cases on the Ontario system where constraints are bi-directional. Those that come to mind immediately specific to H2O's operations are the Flow North/Flow South and East/West transfer limits.</p> <p>For those resources which are impacted by a bi-directional constraint, it is very unclear how the IESO will evaluate the assessments and impacts – there is, in our view, a strong possibility that the results will be contra-indicative, in which case how do the conduct and impact tests get applied?</p>	<p>While interfaces are bi-directional, the transmission facilities and operating security limits (OSLs) used by the DSO are associated with incremental flow in a single direction. For example, there is an "east/west flow-east" constraint and an "east/west flow-west" constraint. When the flow-east constraint is binding, the IESO cannot increase scheduled flow over that interface in the eastward direction.</p> <p>When assessing ex-ante mitigation involving narrow constrained areas (NCAs) and dynamic constrained areas (DCAs), the IESO will monitor the constraints in the import direction into the constrained area. When such an import constraint is binding, the IESO will apply the conduct test to resources in the NCA or DCA. If any resources fail the conduct test, the IESO will carry out the impact test. Constraints in the export direction are not assessed in the market power mitigation framework, as export congestion tends to depress prices, which is outside the purview of the framework.</p>

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104	H2O Power	n/a	<p>The slide titled "Calculation Engine Background: Ex-Ante Conduct Tests" (slide 18) indicates that, in the event an offer fails the conduct test, the entire offer is mitigated and not simply the layer(s) that failed the test. This is extremely problematic for a number of reasons.</p> <p>Specific to hydroelectric resources, the pricing of the upper offer layers will normally reflect fuel (water) availability. At times of low water availability, a high price will indicate "available to run if really needed but would rather not" for that incremental volume of water. However, if mitigation measures are applied to the entire offer curve, this places the hydro generator in a position where his complete offer (now lowered) curve is more likely to be in-market and thus will further expend an already tight resource. The net result is placing the generator at risk of encroaching upon or outright violating regulatory limits imposed by Water Management Plans.</p> <p>By shifting the Generator's entire offer curve downwards, this then influences the true market validity of the other resources in that zone and risks making another adjacent Generator's otherwise</p>	<p>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, but notes that the market rules will continue to permit a market participant to act to ensure the safety of a person, prevent damage to equipment, or prevent the violation of applicable law in the renewed market. The market power mitigation framework will also 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. Further, MRP has introduced new operational parameters that hydro resources can use to reflect their operational characteristics in the scheduling process. The IESO will continue to work with the waterpower community to achieve a common understanding on these points.</p> <p>Ex-ante mitigation is a keystone of the market power mitigation framework. The choice to incorporate ex-ante mitigation into the framework was discussed with stakeholders during the high-level design phase of market renewal. The IESO also solicited feedback from participants on the specific details around the approach ex-ante mitigation during the detailed design phase. Building from the high-level design and</p>

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			<p>economic and valid offer set uneconomic; an outcome that would be totally unfair.</p> <p>We believe that the more appropriate measure in this case would be to void only those offer layer(s) that fail the conduct test. In this manner, the Generator's as offered pricing remain valid for those layers passing the tests and there is no risk of placing the Generator in a regulatory compromising position. Further, the remaining resources in that zone would continue to be competitive as there wouldn't be an arbitrary scaling of the failed offer curve to skew the outcomes.</p> <p>On a broader scale, H2O remains of the opinion that the IESO does not appreciate the impact that the proposed rule changes, and specifically those triggered by the Market Power Mitigation rules, will have on management of hydroelectric systems including water management. If applied in their present form, Generators will be placed in the position of choosing between IESO instructions or maintaining compliance with their Water Management Plans.</p>	<p>detailed design as well as following many constructive discussions with stakeholders, consultations with industry experts, and review of successful frameworks in neighbouring jurisdictions, the IESO has developed a market power mitigation framework that balances the needs of dispatchable participants along with the market protection demanded by all sector participants.</p> <p>The IESO has proposed a design that replaces the entire offer curve with the reference level curve when any tranche of the offer curve is too high above the reference level, and worked with stakeholders throughout the detailed design and implementation processes to improve the design based on their feedback. The IESO believes that this design is the most appropriate choice for the Ontario market. Market participants can find the rationale for this design decision at:  <a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/tp/2022/iesotp-20220215-mrp-market-power-mitigation-cover-memo.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/tp/2022/iesotp-20220215-mrp-market-power-mitigation-cover-memo.ashx</a>.</p> <p>Please note that the IESO will not replace those offer tranches that are priced below the reference level. For an example of how the IESO will replace offer tranches that fail the conduct test, please see:</p>

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				<a href="https://www.ieso.ca/-/media/Files/IESO/Document-Library/tp/2022/iesotp-20220322-mrp-mpm-hydro-example.ashx">https://www.ieso.ca/-/media/Files/IESO/Document-Library/tp/2022/iesotp-20220322-mrp-mpm-hydro-example.ashx</a> .
105	H2O Power	n/a	<p>The slides on Joint Optimization raises a question specific to whether a dispatchable generator can offer energy only and opt out of the OR Market without being in violation of physical withholding tests for OR. It is understood that valid Energy offers are required to participate in the OR market, but there is no statement that we are aware of that explicitly indicates that a dispatchable Generator can opt out of the OR Market while still participating in the Energy market. The implication inherent to the documents to date is that the dispatchable generator must, by default, participate in both Energy and OR markets.</p> <p>The comments above on the impact of a mitigated offer curve apply equally to OR offers, and perhaps with a greater degree of concern, to the related water management concerns.</p> <p>One of the consequences of a unilateral "optimization" will be in the Generator's inability to effectively manage water resources in a timely and efficient manner to meet the outcome of the</p>	<p>Market participants have no obligations to offer energy or operating reserve in the current market nor will they have such obligations in the renewed market.</p> <p>Operating reserve only impacts energy production to the extent that contingencies result in activating standby operating reserve offers. Mitigation does not affect the frequency of contingencies or operating reserve activations. Applying mitigation to operating reserve offers makes operating reserve, the standby service, lower-priced. Applying mitigation to standby offers for operating reserve does not significantly impact energy production. Market participants can continue to offer energy as price-takers to increase the chances that they are scheduled in the energy market.</p>

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			<p>optimized calculation. Pre-emptively moving water out of storage to meet an anticipated but ultimately unrealized energy plan will lead to unnecessary spill, while conversely failure to do so can result in a Generator's local forebay being depleted sooner than expected. Movement of water is not an immediate occurrence and may take, in some instances, days to set up.</p>	
106	H2O Power	n/a	<p>The value of the various threshold values in the conduct and impact tests requires deeper scrutiny. The concern resides with volatility of fuel pricing. If fuel pricing rises to the point where the MIN function dominates the reference price (which is determined in large part by fuel pricing), the Generator's marginal profitability decreases. The effective outcome of this is to erode the financial margins and ultimately viability of the Generator.</p>	<p>The current conduct and impact thresholds appeared in the Market Power Mitigation Detailed Design 2.0 document, published January 28, 2021. In addition, the conduct and impact threshold values and rationale were the focus of a technical session the IESO hosted in September of 2019.</p> <p>The intended function of market power mitigation is to prevent market participants from increasing prices above their short-run marginal costs on occasions when they have market power. The IESO does so by ensuring that their offer prices are consistent with those short-run marginal costs. When mitigation is applied, an offer is replaced with the reference level, which reflects the short-run marginal cost of a resource, including opportunity costs that account for the value of limited fuel for hydroelectric resources.</p>