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March 16, 2022

To: Jessica Savage, IESO

From: Marc Mantha, H2O Power Holding LP

Copies: Stephen Sommerville, Jim Gartshore – H2O Power Holding LP  
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Paul Norris, Ontario Waterpower Association  
Lynn Wizniak, OPG  
Michael Mosco, Evolugen

Re: **Market Power Mitigation Presentation to the IESO Technical Panel dated February 15, 2022 - H2O Power Comments and Observations**

H2O Power has reviewed the presentation made to the IESO Technical Panel on the topic of Market Power Mitigation. The presentation has raised additional concerns and questions that we did not detect in our earlier review of the various documents regarding Market Power Mitigation. The presentation also substantially reinforced previously raised concerns specific to hydroelectric resources.

The discussion below will point to specific slides in the deck presented to the TP.

1. 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.

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?

2. 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.

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



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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.

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 economic and valid offer set uneconomic; an outcome that would be totally unfair.

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.

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.

3. 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.

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.

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 optimized calculation. Pre-emptively moving water



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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.

4. 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.

We remain available to further discuss these concerns with IESO at your convenience.

Regards,

A handwritten signature in blue ink, appearing to read 'Marc Mantha', is written over a light blue horizontal line.

Marc Mantha, P.Eng  
Vice President, Operations  
H2O Power Holding LP