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September 15, 2020

Dear Shawn,

This submission responds to the Independent Electricity System Operator's August 27, 2020 presentation (*Market Power Mitigation Reference Levels and Reference Quantities Engagement Kick-Off*), presentation background document (*Stakeholder Engagement Pre-Reading Market Power Mitigation – Reference Levels and Reference Quantities– August 27, 2020*), and associated Workbooks (Energy Storage Resources, Hydro Resources, Solar Resources, and Wind Resources).<sup>1</sup>

Power Advisory LLC has coordinated this submission on behalf of a consortium of renewable generators, energy storage providers, and industry associations (i.e., the "Consortium"<sup>2</sup>).

At this time, the Consortium is providing high-level process-related comments regarding:

- Preliminary comments on IESO proposed market power mitigation framework components of Reference Levels and Reference Quantities;
- Comparison of IESO proposed market power mitigation components used within other wholesale electricity markets;
- Other aspects of IESO proposed market power mitigation that need to be specifically addressed through additional stakeholder engagement meetings;
- Need for enhanced governance, decision-making, and recourse regarding market power mitigation and IESO's application; and,
- IESO proposed stakeholder engagement timelines regarding Reference Levels and Reference Quantities.

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<sup>1</sup> See <http://www.ieso.ca/en/Market-Renewal/Stakeholder-Engagements/Update-Meetings> for all documents

<sup>2</sup> The members of the Consortium are: Canadian Renewable Energy Association; Axium Infrastructure; BluEarth Renewables; Boralex; Capstone Infrastructure; Cordelio Power; EDF Renewables; EDP Renewables; Enbridge; ENGIE; Evolgen (by Brookfield Renewable); H2O Power; Innergex; Kruger Energy; Liberty Power; Longyuan; NextEra Energy Canada; Pattern Energy; Suncor; and wpd Canada.

## **Preliminary Comments on Reference Levels and Reference Quantities**

The Consortium thanks the IESO for providing initial and draft thoughts on the short-run marginal cost components for hydroelectric generators, solar generators, wind generators, and energy storage resources regarding Reference Levels. By organizing these cost components within itemized lists, this helps to provide focus towards future finalization of the components themselves and associated dollar amounts per each respective generation facility and resource.

Based on the experience of many Consortium members who actively participate within the U.S. wholesale electricity markets – all with the same (i.e., Conduct & Impact Test) or very similar (i.e., Pivotal Supplier Test) market power mitigation framework – the Consortium offers these high-level and preliminary comments at this time regarding Reference Levels.

- For variable (i.e., wind and solar) generators (VGs), the proposed short-run marginal cost components seem reasonable, and are in-line with short-run marginal cost components used within the U.S. wholesale electricity markets.
- For hydroelectric generators, the proposed list of short-run marginal cost components is a good starting point to begin discussions between hydroelectric generators and IESO. Because hydroelectric generation facilities are very site specific regarding their costs, IESO should expect wide variation of actual costs across all hydroelectric generation facilities. It is not clear why certain costs (e.g., labour, etc.) that are incremental relating to energy production or operating reserve (OR) supply were not including within the list of short-run marginal cost components. Opportunity costs will require analysis and further discussions, as this concept must necessarily respect the characteristics of respective hydroelectric generation facilities to produce energy and supply OR given facility-specific operational capabilities, while effectively valuing energy and OR within the IESO-Administered Markets (IAM). The Consortium notes that within the hydroelectric generation Workbook that short-run marginal cost component #E.1 definition of opportunity cost is listed as “to be provided by IESO” within the “Definition of Cost Components” worksheet. The Consortium strongly believes an open and constructive dialogue is needed to collectively determine applicable opportunity costs – both definition and methodologies for calculations.
- For energy storage resources, the Consortium notes that integrating most energy storage technologies within all wholesale electricity markets is relatively new, and notes the lack of experience within the U.S. wholesale electricity markets regarding application of market power mitigation to most energy storage resources (i.e., other than pumped storage). Even though there presently are no ‘hybrid’ energy storage resources co-located with VGs within Ontario, the Consortium is curious to learn and explore how ‘hybrids’ will be addressed within market power mitigation, as ‘hybrids’ are rapidly being developed and integrated within many wholesale electricity markets.

Regarding Reference Quantities, the Consortium offers these high-level and preliminary comments at this time; however, all comments and recommendations listed within the Consortium's July 31, 2020 submission<sup>3</sup> commenting on the draft *Market Power Mitigation Detailed Design 1.0* regarding Reference Quantities and their application should be kept in mind and be addressed.

- The Consortium is pleased and supports IESO's revised proposal to use their centralized forecast energy production for VGs as Reference Quantities rather than the initial proposal of using capacity factors (or similar) for VGs as had been used within past IESO power system planning documents.
- Nameplate capacity less planned outages and de-rates is a reasonable starting point to determine Reference Quantities for energy storage resources. Due to the newness of most energy storage technologies being integrated within wholesale electricity markets, the Consortium supports IESO's position to update methodologies to determine Reference Quantities for these resources.
- The proposed two methodologies to calculate Reference Quantities for hydroelectric generators with a maximum daily energy limit (max DEL) and without a max DEL require more discussion and analysis. This is because of potential deviations from offer quantities and actual dispatch resulting from estimates of minimum available energy (in the case of max DEL being applied) and use of historical energy production profiles (in the case without max DEL being applied). That is, both methodologies may or may not be accurate indicators of actual energy production capability or actual capability to supply OR within real-time dispatch hours and intervals. This is a good example where market participant (MP) recourse needs to be clarified if respective hydroelectric generators become subject to physical withholding mitigation unfairly.

The Consortium looks forward to continuing dialogue and analysis regarding Reference Levels and Reference Quantities within future IESO stakeholder engagement meetings, including meetings between IESO and individual Consortium members and/or sub-groups (by technology).

### **Comparison with Other Wholesale Electricity Markets**

We note that four U.S. wholesale electricity markets administer Conduct & Impact Tests (i.e., NYISO, ISO-NE, MISO, and SPP).

The Consortium requests IESO to provide data/information on the short-run marginal cost components relating to Reference Levels, methodologies used to determine Reference Levels, and methodologies used to determine Reference Quantities, within the U.S. wholesale electricity markets that administer Conduct & Impact Tests.

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<sup>3</sup> See <http://www.ieso.ca/Market-Renewal/Stakeholder-Engagements/Energy-Detailed-Design-Engagement>

The Consortium also requests IESO to provide commentary on the application of Reference Levels and Reference Quantities within the applicable U.S. wholesale electricity markets regarding:

- Frequency of change to Reference Levels and Reference Quantities;
- Frequency market power mitigation actually applies resulting in revisions to respective offer prices and applicable changes to financial settlements and charges to MPs; and,
- Framework for oversight including governance, decision-making, and MP recourse relating to establishing Reference Levels and Reference Quantities, changes to financial settlements, and application of financial charges and penalties.

### **Other Aspects of Market Power Mitigation Need Specific Stakeholder Engagement**

The Consortium is pleased to have the opportunity to provide comments on IESO's proposed Reference Levels and Reference Quantities. We are also pleased that during the August 27, 2020 IESO webinar (i.e. MRP Implementation – Market Power Mitigation), IESO stated that they have been reviewing submissions from MPs and stakeholders and have determined that a revised draft version of *Market Power Mitigation Detailed Design 1.0* (i.e., Issue 2.0) will be released this fall.

In addition to scheduled stakeholder engagement meetings regarding Reference Levels and Reference Quantities, IESO needs to plan and schedule for additional stakeholder engagement meetings to address other components within the market power mitigation framework. For example, as discussed within the Consortium's July 31, 2020 submission commenting on the draft *Market Power Mitigation Detailed Design 1.0*, IESO needs to further engage on the conditions to test for market power mitigation. That is, MPs need to clearly and transparently understand how IESO will determine Constrained Areas, as all generators and other applicable resources located within respective Constrained Areas will then be assessed by IESO for potential exercise of market power and potential mitigation under the Conduct & Impact Test.

### **Need for Enhanced Governance, Decision-Making, and Recourse**

Also as stated within the Consortium's July 31, 2020 submission commenting on the draft *Market Power Mitigation Detailed Design 1.0*, and in previous Consortium submissions dated February 20, 2018 and December 1, 2017<sup>4</sup>, the framework for governance, decision-making, and MP recourse within other wholesale electricity markets provides MPs and stakeholders with more robust input and/or decision-making authority regarding market design changes and rule amendments, as well as regulatory oversight, compared to IAM. Regarding regulatory oversight, for all U.S. wholesale electricity markets under the Federal Energy Regulatory Commission's (FERC's) authority<sup>5</sup>, FERC has oversight regarding wholesale

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<sup>4</sup> See submissions are located at <http://www.ieso.ca/en/Market-Renewal/Stakeholder-Engagements/Market-Renewal-Working-Group>

<sup>5</sup> FERC does not have any jurisdictional oversight of the Electricity Reliability Council of Texas (ERCOT) wholesale electricity market or power system

electricity market rules or their equivalent. Therefore, specifically for market power mitigation, all design changes and rule amendments are ultimately decided by FERC through transparent and inclusive regulatory proceedings.

The Consortium is particularly concerned by the inclusion of Reference Levels and Reference Quantities within applicable IESO Market Manuals, considering that Market Manuals not subject to any appeals to the Ontario Energy Board (OEB) – that is, only amendments to the IESO Market Rules can be appealed to OEB.

Therefore, the Consortium recommends that IESO reconstitute the Governance and Decision-Making Advisory Group<sup>6</sup> now to begin working with IESO, and then MPs and stakeholders, towards further enhancements to the framework of governance, decision-making, and recourse within IAM – specifically regarding all relevant aspects of IESO’s proposed market power mitigation framework, including but not limited to Reference Levels and Reference Quantities.

### **Stakeholder Engagement Timelines**

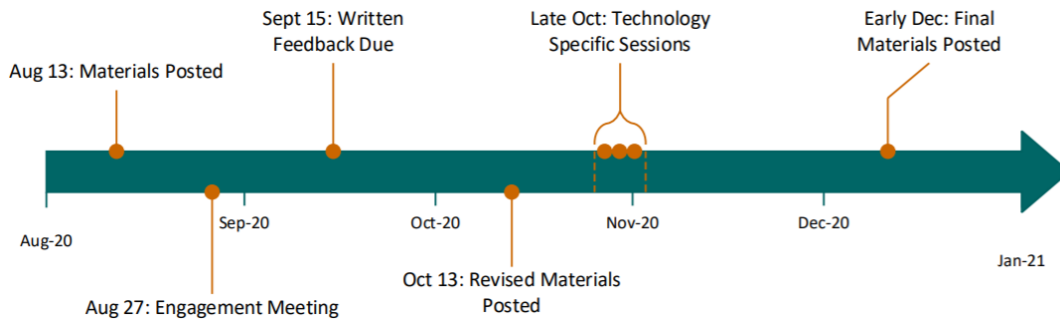
Based on the timeline presented below from IESO’s August 27 webinar, the Consortium offers the following comments:

- Considering the importance and financial implications of market power mitigation, including but not limited to IESO application of Reference Levels and Reference Quantities, proposed IESO timelines are too tight – especially considering the very technical nature of the market power mitigation framework planned for by IESO and its newness to IAM and its MPs;
- Within generation companies, key staff that do not have responsibilities to track the Market Renewal Program (MRP) and all of its planned changes need to be engaged so as to comment on IESO’s proposed Conduct & Impact Test components (e.g., Reference Levels, Reference Quantities, etc.), and then be in position to prepare for technology-specific then facility-specific discussions with IESO;
- For some generators (e.g., hydroelectric generators in particular), IESO proposed Reference Levels will require time to reach agreement, with potential for ‘negotiation-like’ meetings lasting over multiple months;
- More clarity is needed regarding what “Final Posted Materials” are being scheduled for December 2020 – is this relating solely to the technology-specific Workbooks and their components or something additional?
- What are the timelines to finalize facility-specific Reference Levels and Reference Quantities?

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<sup>6</sup> See <http://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Completed/IESO-Governance-and-Decision-Making> for scope of Governance and Decision-Making Advisory Group

- Decisions made regarding facility-specific Reference Levels and Reference Quantities will have financial implications for generators, which will then have implications for MRP-related amendments to contracts triggered by MRP-related amendments to the IESO Market Rules, therefore timelines to amend contracts need to be factored in; and,
- As stated above, MPs require enhanced governance, decision-making, and recourse within IAM (especially applicable to the market power mitigation framework within MRP), and therefore this needs to be addressed and resolved as soon as possible – otherwise the planned timelines in the graphic below will simply not be met.



The Consortium will be happy to discuss the contents of this submission with you at a mutually convenient time.

Sincerely,



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Managing Director  
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cc:  
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JJ Davis (Kruger Energy)  
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