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APPRO
ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

April 27, 2018

Independent Electricity System Operator
Attention: Market Renewal Project Team
1600 – 120 Adelaide St. West
Toronto, ON M5H 1T1

**RE: Written Submission of the Association of Power Producers of Ontario (APPRO)
Market Power Mitigation (March 27, 2018 Materials)**

The Association of Power Producer of Ontario (APPRO) would like to thank the IESO for the opportunity to comment on the Market Power Mitigation (MPM) materials presented on March 27, 2018 session. It is beneficial for all market participants to gain a better understanding of how reference levels and conduct and impact thresholds could be determined in a future market.

APPRO is a trade association representing Ontario independent power producers and over 100 suppliers of services, equipment and consulting services. APPRO members produce power from co-generation, hydro-electric, gas, nuclear, wind, energy waste wood and other sources. Generator members include:

1. Algonquin Power
2. Bruce Power
3. Brookfield Renewable Energy
4. Capital Power
5. Capstone
6. ENGIE
7. Goreway Station
8. Greenfield Energy Centre
9. GTAA
10. H₂O Power
11. Kruger
12. Markham District Energy
13. Northland Power
14. Oakville Enterprises
15. Portlands Energy Centre
16. Regional Power
17. St. Catharines Hydro Generation
18. TransCanada Energy Ltd.
19. TransAlta
20. Toromont

Reference Level – Economic Withholding

The IESO provided 3 possible methodologies for setting the reference level:

- Offer-based;
- LMP-based; and,
- Cost-Based

Should reference levels be offer-based or LMP-based, then APPrO agrees there is a need to adjust for fuel (slide 23). However, APPrO requires the proposed methodology for fuel-adjustment in order to properly assess these 2 approaches.

Notwithstanding the above, APPrO believes that, foremost, the determination of the reference level needs to be accurate, otherwise the conduct thresholds will need to be more permissive in order not to unduly harm the generator by forcing it to operate when it is not economic to do so. Consequently, APPrO's position is that cost-based reference levels are most appropriate, as a look-back of averages of historical offers and/or LMPs is not a good indicator of prevailing market conditions that could impact a resource's reference level. The methodology for determining cost-based reference levels should be outlined in the market rules and manuals, with the details (e.g., determining the gas-index, heat rates, O&M, etc.) to be fully stakeholdered in a future session/s. APPrO believes these reference levels need to be determined on a resource/unit-specific basis.

With respect to natural gas fired (NGF) generators, there could be days where access to fuel on the intra-day market is constrained and therefore, a need for a generator to offer at a higher level than permitted within the MPM safe-harbours. On these rare occasions, there should be a mechanism that would allow these generators to contact the IESO and indicate why they are offering outside their MPM conduct thresholds. With supporting data that would be provided, the IESO should allow the (true marginal cost) offer to stand and not mitigate the resource down to its reference level; forcing it to operate at a loss. Although the details of the "exception" mechanism and process (i.e. timing of when notice is to be provided, type of supporting data, etc.) requires fuller and more detailed discussions, APPrO believes this is an important aspect of the market power mitigation framework design as without this feature an even greater importance will be placed on the dispute resolution and decision-making process.

Further, specific to combined cycle NGF generators, APPrO would like to understand how the IESO intends to determine the reference level for the steam turbine. Is the intent to break it down into tranches, with one tranche, for example, related to the unfired combined cycle heat rate and another related to the duct fired component? Or does the IESO have a different perspective on how steam turbine reference levels could be calculated? Please note these are preliminary questions at this time and not an exhaustive list. As such, APPrO suggests that further discussions with NGF generators is required on this topic to flush out the key issues and address any further questions and concerns on this and other issues with respect to MPM design.

Conduct Thresholds – Economic Withholding

With respect to the conduct thresholds, APPrO appreciates that the numerical values in the slide deck are for illustrative purposes only. However, APPrO would like to get a better understanding of how the IESO plans to determine those threshold values. It is APPrO's position that these thresholds should be based on principles and conditions appropriate for Ontario and should not be arbitrarily chosen or picked because "others" use those values. What is implemented in other US markets may not be appropriate in the Ontario context and therefore, APPrO recommends the IESO and participants work together to establish the principles for the purpose of determining the conduct (and impact) threshold values/deadbands.

Physical Withholding

APPrO supports an ex post evaluation for physical withholding. However, when designing the regime for physical withholding the IESO needs to recognize that certain exceptions may have to be incorporated into the framework so that resources are not unjustifiably mitigated and forced to run at an economic loss. As mentioned earlier in this submission, there may be rare occasions where a NGF generator's offer may have to either be outside its safe harbor and/or the IESO will need to allow generators to withhold offering a certain quantity if doing so would constrain them to run at an economic loss.

In situations of physical withholding a formula-based penalty approach is likely preferred over a compliance infraction; however, as stated above there could be justified reasons for not offering a certain quantity and in those cases the participant should have the avenue to discuss its reason and rationale with the appropriate IESO personnel.

Market Power Mitigation Session #2

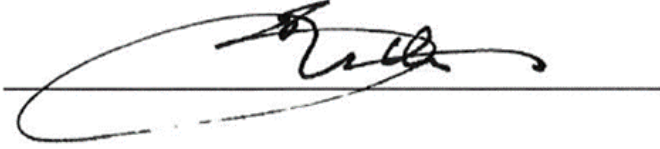
APPrO suggests another session(s) strictly devoted to MPM would be valuable. At this session(s), APPrO recommends the focus should be on the following:

- Specific examples of how MPM will be applied and flow from the day-ahead to the real-time timeframe;
- How MPM would be applied to commitment costs and how the IESO plans to determine eligible costs;
- Exception process and mechanics (for both physical and economic);
- Principles discussion on setting conduct & impact thresholds;
- Details and mechanics around determining the reference level methodology;
- Discussion around methodology for calculating steam turbine reference levels; and,
- Interplay between the ICA and energy workstreams with respect to MPM. Certain decisions in the ICA will have impacts on the MPM framework in the energy market and vice versa. There needs to be holistic discussion regarding the intricacies between all the workstreams in order to provide the confidence required to make market renewal successful.

As the concept of market power mitigation is new for the Ontario wholesale market and discussions are still very high-level, APPrO's comments at this point are very preliminary and once more details are brought forward APPrO may have additional comments and/or questions.

Should you have any further questions on this submission, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "David Butters", is written over a solid horizontal line. The signature is stylized and cursive.

David Butters
President & CEO