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APPRO

ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

March 21, 2018

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

**RE: Written Submission of the Association of Power Producers of Ontario (APPRO)
Enhanced Real-Time Unit Commitment (January 31, 2018 Materials)**

The Association of Power Producer of Ontario (APPRO) would like to thank the IESO for the opportunity to comment on the Enhanced Real-Time Unit Commitment (ERUC) materials as presented at the January 31, 2018 session. APPRO is a trade association representing Ontario independent power producers and over 100 suppliers of services, equipment and consulting services. APPRO members produce electricity from co-generation, hydro-electric, gas, nuclear power, wind, 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

APPPrO's submission will focus on the following design elements:

- Design Element 5: Intertie Transactions
- Design Element 6: Must-Offer Requirements
- Design Element 7: Make-whole Payments
- Design Element 9: Commitment Cost Mitigation
- Design Element 10: Offer Changes
- Design Element 12: Make-Whole Payments

As the IESO is making decisions on each design elements incrementally, APPPrO reserves the right to change its position or to provide additional comments as the full impact of these incremental design decisions can have on the generators physical operations, earnings and contracts.

Design Element 5: Intertie Transactions

This design element requires more clarification before either option can be supported. Questions for consideration/clarity:

1. Under option 1: If only DAM Intertie transactions are evaluated in ERUC, does this mean that you cannot participate in RT without a DAM schedule?
2. Under Option 2: What is the timing of the ERUC advisory schedule, and how does it compare to the current PD schedule timing?
3. Option 2: How would penalties differ from the current intertie failure charges and would they only be applied if the schedule deviation had a negative impact on the market?

Design Element 6: Must-Offer Requirements

With respect to must-offer obligations, APPPrO has the following comments/concerns:

1. The real-time must-offer requirement rules must work seamlessly with the market power mitigation framework. For example, if must-offer obligations are to be placed on gas-fired resources in the real-time, the IESO needs to acknowledge that commodity costs and the associated gas delivery and management services (GD&M) will likely come at increased costs (compared to having procured gas and arranging for its the delivery in day-ahead timeframe). As such either the market power mitigation thresholds or the must-offer rules need to be flexible enough so as not to unintentionally mitigate or unduly penalize the resource, creating a situation whereby the generator is not recovering its variable cost to generate.
2. With respect to notification of unavailability, it is APPPrO's opinion that an outage slip may not always be the appropriate mechanism. It should be considered that certain contracts, like the CES, have an Availability component and any outage slip submitted will impact that resource's availability calculation. Consequently, certain types of unavailability may require a different/new mechanism to signal to the IESO that it is not available. Unavailability due to the lack of liquidity in the intra-day natural gas markets or the

inability to access GD&M services, is such an example where a new notification process should likely be considered.

3. The capacity to be offered under ERUC should be the registered capacity less (i) any capacity derate/outage through the existing Outage Submission process and (ii) any capacity unavailable as derived from bullet #2.

Design Element 7: Eligibility for Make-Whole Payment

APPo supports the preliminary decision that those same resource characteristics establishing eligibility for the current real-time generator cost guarantees will be used to determine eligibility for commitment and make-whole payment under a future ERUC.

Design Element 9: Commitment Cost Mitigation

As market power mitigation (MPM) will be a new feature in Ontario in both the DA and RT markets and likely adding risk on Ontario resources, it would be helpful if the IESO could hold a session strictly devoted to MPM. It would be beneficial if the IESO could illustrate a few examples looking at how MPM will be applied (and the potential impacts of being mitigated) in the DA and how that flows through to RT. Additionally, and specific to the ERUC project, APPo would also like to understand how MPM would be applied to commitment costs and how the IESO plans to determine eligible costs. Having this session will help stakeholders better prepare to provide informed submissions and recommendations in the all the energy workstreams when it comes to establishing the appropriate reference levels and conduct and impact thresholds.

As part of this session, APPo would also request that the IESO review MPM as it relates to capacity markets and locational design elements. In order to fully evaluate MPM in both the DA and RT, it will be contingent upon also understanding how it will be applied in the ICA. Moreover, as the IESO moves to locational pricing in energy and capacity, maintaining a clear linkage between these discussions is critical as decisions made on this design element will have impacts on other elements, such as net-CONE (over mitigation will invariably increase locational net-CONE). Furthermore, over mitigation in the DA and RT markets will also create revenue shortfalls, putting existing generators and new investment at risk.

Lastly, and although this may be better suited to discuss in the SSM workstream, APPo has concerns over how MPM will work alongside shut-down offers. With respect to signaling shutdown, generators may need to offer above their reference levels in order to guarantee a shutdown, however this could potentially cause the generator to fail the conduct and impact test and ultimately being mitigated. E.g., how will the IESO ensure a generator's offer is not mitigated as a result of the market power mitigation framework and potentially forcing the unit to stay online?

Design Element 10: Offer Changes

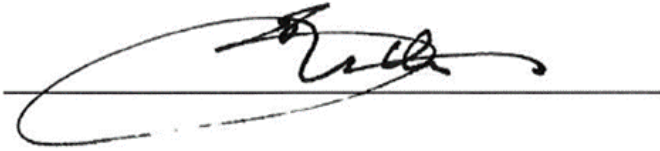
APPo assumes the offer price restriction is only in relation to offer increases and not decreases. However, can the IESO please confirm this understanding?

Design Element 12: Calculation of Make-Whole Payment

It is APPrO's opinion that make-whole payments should be based on the commitment period (option 1), similar to today's RT-GCG program. ERUC is a reliability program and only those hours committed under ERUC should be included in the cost/revenue calculation for the purpose of make-whole payments.

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 horizontal line. The signature is stylized and cursive.

David Butters
President & CEO