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June 21, 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)
Enhanced Real-Time Unit Commitment (May 24, 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 presented at the May 24, 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 power from co-generation, hydro-electric, gas, nuclear, wind, energy waste wood and other sources. Generator members include:

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

APPRO's comments will focus on the following design elements:

- Design Element 10: Offer Changes
- Design Element 12: Make-Whole Payments

DESIGN ELEMENT 10: OFFER CHANGES

As requested by the IESO at the May 24th session (slide 34), APPRO would like to provide additional feedback with respect to this design element. In APPRO's May 11, 2018 submission (with respect to March 29, 2018 materials), APPRO noted that while offer price and non-offer price restrictions were warranted, some flexibility from these restrictions would also be required as there could be bone fide situations where a change may be necessary.

An offer price change may be warranted in a situation where a natural gas-fueled facility receives a real-time unit commitment by pre-dispatch (PD) based on offers calculated and submitted using indicative fuel costs. That facility may find that, upon intraday procurement of fuel, swift market changes have significantly impacted the price of gas (similar to what happened during the polar vortex in 2014). All or a portion of start-up, speed-no-load and incremental energy costs associated with the committed run will have changed. Similarly, a natural gas-fueled facility may make arrangements to fuel a committed run or a generator's expected run based on the advisory schedule, with indicative offers representative of the operating costs. However, as changes to the commitment or advisory schedule occurs throughout the day, either before, within or as an extension to the advisory schedule's operating hours, may require additional fuel supply arrangements; either additional procurement or additional balancing services.

During these rare occasions and to the extent the offer price restrictions are limiting, a change in offer price should be permitted to reflect the generator's true operating costs and to ensure the facility is not forced to operate at a financial loss.

This rationale has linkages with design element 12 (make-whole payment).

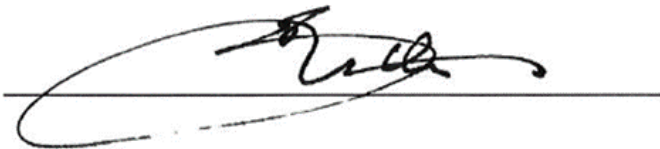
DESIGN ELEMENT 12: MAKE-WHOLE PAYMENT

Similar to the rationale for design element 10 (offer changes), this same type of circumstance could apply to the make-whole payment design element, specifically as it relates to secondary decisions #3 and #4 (per slides 59-61).

With respect to a manual reliability commitment, APPrO agrees that a separate make-whole payment should be assessed for the reliability commitment. However, as the generator was not committed by the PD, it is likely that that generator was expecting to come offline. Consequently, the gas-fueled generator would likely not have procured fuel or transportation services for that additional (manual) reliability commitment. Therefore, the last PD offer price may no longer be reflective of a gas-fueled generator's true cost. This situation is analogous to the one discussed above in design element 10.

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