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BY E-MAIL TO: Registrar@oeb.ca

To: Ms. Nancy Marconi
Registrar
Ontario Energy Board

Dear Ms. Marconi,

**Subject: EB-2021-0243 (Phase 1 – Export Transmission Service Rate)
Interrogatories on Power Advisory Report (for APPrO)**

Please find attached my interrogatories in relation to the submission titled “Expert Report for market impacts of changes to the ETS Rate”, dated May 2022 and prepared by Power Advisory on behalf of APPrO.

Sincerely,

Naren Pattani
Intervenor

OEB PROCEEDING EB-2021-0243:
Generic Hearing on Uniform Transmission Rates

Export Transmission Service Rate (Phase 1)
Interrogatories for Power Advisory / APPrO

1.0 INTRODUCTION

These interrogatories are with respect to the “Expert Report for the market impacts of changes to the ETS Rate”, dated May 2022, prepared by Power Advisory for the Generic Hearing on UTR-Related Issues and the Export Transmission Service (ETS) Rate [Phase 1 of OEB Proceeding EB-2021-0243]. For some of the interrogatories below, a context section is provided to explain the rationale for posing a given question.

The interrogatories are in respect of the evidence of the authors, Mr. Travis Lusney (Professional Engineer) and Mr. Brady Yauch (Economist) who are expert witnesses in accordance with OEB procedures. Some of the interrogatories seek their clarifications and opinions based on following clauses in their Power Advisory Report:

- Para 7 on Page 5: Rule 13A of the OEB Rules of Practice and Procedures “*provides that an expert shall assist the Board impartially by giving evidence that is fair and objective.*”
- Para 6(i)(1) states that Power Advisory was instructed to provide “*a review and commentary of the evidence filed by the parties in this proceeding as well as any other prior proceeding with the ETS and related matters*”.
- Para 2(i) states that Power Advisory was to “*prepare a statical analysis on the sensitivity of Ontario exports to price changes, together with an analysis of the impact of such price changes on intertie congestion revenues and other ratepayer benefits derived from exports.*”

2.0 INTERROGATORIES

Interrogatory #1

Ref. • Figure 7 on Page 27 of Power Advisory Report; Table 1 on Page 10 of the Power Advisory Report

Context: The illustrative Figure 7 on Page 27 of the Power Advisory Report explains how the Market Clearing Price (MCP) in Ontario is determined using economic merit orders (generator offer prices).

Questions:

- (a) Based on how MCP is determined, please confirm that if the total demand in the Ontario system were to be higher due to exports (for example, due to 2,000 MW of exports in any hour), the MCP, and therefore the Hourly Ontario Electricity Price (HOEP), would directionally be higher for the consumers in Ontario in that hour? (Please note that, this question is not meant at all to suggest that exports should be discouraged; it is simply intended to aid in understanding the impact of exports on the MCP).
- (b) Please explain why such an impact (of higher HOEP due to Exports) was not assessed, nor noted, in the Power Advisory Report, for example in Table 1 on Page 10 which summarizes the Financial Impact of Increase and Decrease to the ETS Rate?

Interrogatory #2

Ref. • Quantitative Analysis in the Power Advisory Report, summarized by Table 1 on Page 10 of the Power Advisory Report.
• IESO's Planning Outlook, December 2021.

Context: The quantitative analysis covered by the Power Advisory Report appears to be based on historical data from the years 2018 to 2020 (as stated in para. 23 on Page 10). The IESO's Planning Outlook, December 2021, indicates on Page 5 that

there is “potential for considerable change through the 2020s and early 2030s due to the combined effect of nuclear retirements, ongoing nuclear refurbishment outages, and expiring supply contracts and commitments” and that “with the pandemic recovery well underway, the IESO’s forecasts show steady average growth (in demand) of about 1.7 per cent a year”. It also indicates on Page 6 that “potential energy shortfalls are forecast to begin in 2026 and grow substantially ...”.

Questions:

- (a) Please explain why the data from the IESO’s Planning Outlook was not used to forecast the Financial Impact reported on Table 1 on Page 10?
- (b) While it is unrealistic, at this stage, to request that Power Advisory recalculate the numbers to update Table 1 based on the more recent forecast of resource data, please provide a commentary about the directional trend (upwards or downwards) of numbers on Table 1 with the forecast changes in generation resources specifically as per the IESO’s Planning Outlook, December 2021.
- (c) Please comment on whether the extent and periods of congestion on interties during periods of exports from Ontario are likely to increase or decrease due to the changes specifically anticipated in IESO’s Planning Outlook, December 2021.

Interrogatory #3

- Ref. • Para 31 on Page 12, and Para 47 on Page 16, of Power Advisory Report
- IESO Document: Ontario Resource and Transmission Assessment Criteria – Issue 5; Effective Date August 2007.

Context: The narrative that Hydro One and IESO do not consider, nor factor, exports into planning is incomplete without clarification, and it needs closer examination.

No doubt, Hydro One and IESO do not plan *new* explicit interconnections to increase existing export capability. However, transmission planners must continue to consider the maintenance of existing intertie capability, including for exports. This consideration is made both for refurbishments at interties and for new capacity planning for internal transmission that feeds intertie points:

- (1) Hydro One does indeed spend OM&A funds and, when necessary, capital funds to maintain and replace existing interconnection facilities as well as the internal transmission upstream of interconnections to ensure that the existing export capability is not compromised.
- (2) In planning internal transmission system upgrades, Hydro One does include the need to *maintain* existing export capacity downstream from the area where local area transmission reinforcements are planned. Indeed, the IESO Document “Ontario Resource and Transmission Assessment Criteria” (ORTAC), which is used by the planners to *plan internal transmission*, states in Section 3.2 titled “Exports and Imports” that:

“All exports and imports should be taken into account to achieve the conditions of section 3.1. The pre-contingency level of the transfer selected should be based on the existing and projected interconnection capability. Combinations of maximum transactions coincident with high internal power flows should be considered in order to stress the import interface and to ensure studies evaluate the full range of power flow scenarios.”

Questions:

- (a) Please clarify the notion that IESO and Hydro One do not plan based on providing for Exports (as stated in the Power Advisory report at the location referenced above) by addressing the fact that

Hydro One does indeed fund repairs and maintenance of existing interties and internal transmission facilities feeding the interties in order to maintain existing export capability. If it is believed that such funding is not expended, please provide published evidence, or a statement from Hydro One, that Hydro One does not spend any funds to maintain the reliability of existing export capability.

- (b) To back up the opinion stated in the Power Advisory report (see reference above) that IESO and Hydro One do not plan based on providing for Exports, please provide evidence, in the form of published material or criteria (such as updated ORTAC) or by a statement from Hydro One, that the need for maintaining (reliable continuance of) existing export capability is not considered in planning internal transmission reinforcements upstream from the interties.

Interrogatory #4

- Ref. • Section 4.9 of Power Advisory Report, including comments regarding reduction of ETS Rate to \$0/MWh.
- HONI Response to OEB Staff Interrogatory Response: Table 3 of Excel File HONI_I-01-01-20220513 (Curtailed Exports Data)
 - HONI Response to OEB Staff Interrogatory: Attachment File HONI_I-05-24-03_20220513.xlsm: Tab 01 (for Revenue Requirement) and Tab 18 (for Demand Data).

Context: Based on Tab 01 of HONI file HONI_I-05-24-03_20220513.xlsm, the Network Revenue Requirement for the subject year is \$1,800,412,703 and Tab 18 indicates the domestic energy forecast for the corresponding year is 132,225,424 MWhr. Therefore, the *average, effective* Transmission Network charge to be paid by a domestic customer is approximately \$ 13.6 per MWhr if the ETS Rate were zero. (Please note that this figure of \$ 13.6 per MWhr, calculated based on domestic energy consumption, is provided for context and order-of-magnitude comparison, although it is understood that transmission charges are not collected on an energy basis from domestic transmission customers of IESO.

Further, this context is *not* meant to imply that an ETS Rate of \$ 13.6 per MWhr is appropriate).

Based on Table 3 of Excel File HONI_I-01-01-20220513 (which shows hours when Exports were congested at least on one interface), there was no congestion on any Export interties during anywhere between 65% and 83% of the hours in the years between 2016 and 2021. Thus, Intertie Congestion Pricing (ICP) Charge was not paid by any exports during these periods.

Question:

From an economist's perspective, what is your opinion about the notion that, for a capital-intensive infrastructure for which domestic customers pay effective, average service charges of the order of \$13.6 per MWhr, majority of exports and wheel through transactions should be offered the use of that same infrastructure for free during periods when the transmission infrastructure is not fully utilized (if the ETS Rate were to be zero).

Interrogatory #5

- Ref. • Section 4.9 of Power Advisory Report, including comments regarding reduction of ETS Rate to \$0/MWh.
- HONI Response to OEB Staff Interrogatory Response: Table 3 of Excel File HONI_I_01-01-20220513 (Curtailed Exports Data)

Context: As summarized in the context for Interrogatory #4, the average, effective Transmission Network charge to be paid by a domestic customer is approximately \$ 13.6 per MWhr, if the ETS Rate were to be zero.; and for most of the time in a year, Exports do not pay ICP charge. (Please note that this figure of \$ 13.6 per MWhr, calculated based on domestic energy consumption, is provided for context and order-of-magnitude comparison, although it is understood that transmission charges are not collected on an energy basis from domestic

transmission customers of IESO. Further, this context is *not* meant to imply that an ETS Rate of \$ 13.6 per MWhr is appropriate).

Questions:

Assuming there is no transmission congestion, which historically has been the case more often than not during the year (refer to above-mentioned HONI Response about Curtailed Exports Data), then, from an economist's perspective, what is your opinion about fairness, or otherwise, in the context of "free riding" in the following two scenarios, if the Export Transmission Service (ETS) Rate were set to zero in Ontario and at the same time:

- (a) While a Wheel Through Transaction from Quebec to Michigan (using Ontario's transmission system along over a thousand kilometres) would not have to pay any transmission charge, a domestic industrial customer located in Niagara Falls, Ontario, in the vicinity of Ontario's major hydraulic generation facility would still have to pay an *effective charge, on average*, of \$ 13.6 per MWhr in transmission service charges?
- (b) While a Wheel Through Transaction from Quebec to Michigan would not have to pay any Export Tariff in Ontario, a Wheel Through Transaction from an Ontario generator to New England would still pay full Export Tariff in Quebec?

END