

ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998,
S.O. 1998, c.15, Schedule B, as amended;

AND IN THE MATTER OF a Generic Hearing on Uniform
Transmission Rates Related Issues and the Export Transmission
Service Rate.

**Energy Probe Interrogatories
Hydro One and IESO**

March 25, 2022

Issue 1: Is it appropriate to continue to rely on an Export Transmission Service Rate and on Intertie Congestion Pricing (ICP) to charge for export service?

Issue 1-Energy Probe-1

Reference: Attachment 3, IESO Report: Market Implications of the ETS Rate

Preamble: “Exporters contribute to the cost of the Ontario transmission system through two mechanisms. The first mechanism is through the fixed ETS rate, and the second mechanism is through the dynamic ICP mechanism. When considered together, exporters not only contribute approximately \$30-40 million per year towards the transmission system through the ETS rate but have also paid an average of \$160 million per year towards the cost of the transmission system from the ICP mechanism.”

- a) Please provide a schedule that shows how much ETS and ICP revenues flowed to Ontario domestic customers from 2015-2020.
- b) Please show how much revenue flowed to Transmission Rights Holders over the same period.
- c) When was the ICP revenue allocation changed and what was/is the basis for this? Please provide details and the change in revenue allocated to domestic customers.
- d) Why is/is not the current Ontario ETS rate appropriate? Please discuss.
- e) The Elenchus Report suggests three cost-based ETS rates. Which does the IESO believe to be most appropriate (or does IESO prefer the status quo or zero ETS)? Please support your response with market analysis.

Issue 1-Energy Probe-2

Reference: Attachment 1, Elenchus ETS Rate Cost Allocation Report, July 21, 2021

Preamble: “The May 2014 methodology was based on how the transmission system is designed and since exports needs are not considered in the planning of the transmission system, exports would not be allocated a portion of Shared Network Assets. The methodologies identified in this report account for how exports are being treated by the IESO. Exports use the transmission system almost as much as domestic customers use the system, including at peak times, therefore, exports could be allocated a portion of Shared Network Asset-related costs. If exports are to be allocated a portion of Shared Network Asset-related costs, Elenchus is of the view that exports should also then be allocated a portion of External Transmission Revenues received by HONI.”

- a) Based on 100% cost causality and the HONI Transmission projected annual exports for 2023 what would be:
 - i) the revenue generated from Export Transmission Service,
 - ii) the allocation portion of External Transmission Revenues,
 - iii) the net benefit to domestic transmission customers\$/MWh and Total,
 - iv) the net cost to Export Transmission service customers. \$/MWh?

- b) Based on 50% cost causality and the HONI Transmission projected annual exports for 2023 what would be:
 - i) the revenue generated from Export Transmission Service,
 - ii) the allocation portion of External Transmission Revenues,
 - iii) the net benefit to domestic transmission customers\$/MWh and Total,
 - iv) the net cost to Export Transmission service customers. \$/MWh?

- c) If Exports had been priced under one of the current proposed 3 options, what would have been the revenue to Hydro One Transmission and domestic customers in each year from 2015-2021 based on actual export volumes? Please provide a schedule showing the revenue for each year.

Issue 1-Energy Probe-3

Reference: Joint Submissions, Attachment 3, IESO Submission

Preamble: Understanding historic and future Export volumes provides qualitative evidence regarding options under Issue 1.

- a) Please provide a chart and graphs showing historical domestic and export volumes. Please refer to Elenchus Table 5 in your answer.

- b) Does IESO agree with Hydro One ETS revenue forecast in Table 1?

- c) Please provide a chart showing historical and forecast (2021-2027) domestic and export volumes, assuming the current ETS rate of \$1.85.

- d) Provide a projection of surplus baseload generation 2021-2025. Please provide one or more scenarios. Distinguish nuclear, hydro and gas fired generation. List all assumptions.

- e) Please provide an update to Elenchus Table 6 Export Curtailment hours

- f) Discuss in relative order of importance, the factors other than the ETS rate, which affect the future amount of Exports.

- g) If the ETS rate was zero, discuss directionally how this would impact the forecast volume of exports. If possible, provide qualitative estimates, such as 50% more.

Issue 1-Energy Probe-4

Reference: Submissions on the ETS Rate, Attachment 3, IESO Submission, pages 11-14

Preamble: Understanding the IESO's position regarding options under Issue 1.

- a) Please comment on how the following factors are important to setting the ETS Rate at zero. Please provide analyses to support the IESOs position.
 - Reduction in export volumes due to a potential ETS increase
 - Reduced exports would limit IESO operability options (i.e., require more curtailment of generation to manage Surplus Baseload Generation)
 - Estimated a 1:1 offset of increased revenue of ETS with decreases in ICP funding of TRCA payments to domestic load
 - Increased cost of generation curtailment would further limit benefits of increased ETS revenue
- b) What is IESO's position on parity and reciprocity with interconnected jurisdictions as this relates to the ETS tariff? Please discuss.

Issue 1-Energy Probe-5

Reference.: Submissions on the ETS Rate, Attachment 3, IESO Submission, various pages

Preamble: The Intertie Congestion Price is set during the hour ahead pre-dispatch run and is defined as:

$ICP = \text{Intertie Zone Hour Ahead Price} - \text{Hour Ahead Ontario Zone Price (Real Time)}$

$\text{Intertie Price} = \text{Ontario Market Clearing Price} + ICP$

$ICPx\#TRC = TRC \text{ Payment to Rights Holder.}$

- a) Please confirm/modify EP's understanding of how ICP, clearing price and TRCs work.
- b) Please indicate how these components of export transactions work and provide quantitative examples(s) for a range of pre-dispatch scenarios.
- c) If exports are on average constrained 20% due to congestion, how does this affect the rate for Export Transmission Service? Please discuss. Please reference the Elenchus Report in the answer.
- d) What is the link between ETS and ICP? Please show one or more quantitative examples based on different ETS rates for one or two pre-dispatch scenarios.

Issue 1-Energy Probe-6

Reference: Submissions on the ETS Rate, Attachment 3 IESO Submission, page 8

Preamble: The following Table shows historical Value from Exports

Table 1: Value from Exports 2017-2020

\$Millions	2017	2018	2019	2020
Congestion Rents Collected from Exports	208	191	134	99
Export Transmission Service Tariff (ETS)	35	34	37	38
Uplift collected from Exports	43	52	48	38
Avoided System Costs ¹³	180	240	190	153
Total Value from Exports	466	517	409	327

Source: internal IESO analysis

- a) Please provide 2021 data.
- b) Please confirm Congestion Rents include revenues from TRCA and that Intertie Congestion Pricing revenues in the TRCA are allocated to entities besides domestic load customers. Please indicate amounts allocated to each.
- c) Please provide the underlying equations/calculations that result in each of the above revenue streams.
- d) Please provide a model and populate the equations with actual data for each year.
- e) Please provide the results in Excel format.
- f) Assuming that ETS is a “plug/residual” please provide the total value from exports without ETS i.e., ETS=Zero
- g) Do exporters receive the added value or is it distributed to all market participants in lower UTS rates? Please discuss.

Issue 2.1: If a cost-based approach is used to set the ETS rate, what methodology should be used?

Issue 2.1-Energy Probe-7

Reference: Submissions on the ETS rate, Attachment 1, Elenchus Report

Preamble: In order to understand the Elenchus Cost-Based approach to the ETS the Model and underlying data and assumptions are required in detail

- a) Please provide a workbook for the Elenchus Cost Allocation Model in Excel Format:
 - List of Input data -update for 2020 and 2021 actuals

- Tabs corresponding to the runs for the 3 options proposed by Elenchus. (100%, 50% and 80% cost allocation).
- b) Please provide explanatory notes.
- c) Did Elenchus conduct any sensitivity analysis to its input assumptions. If so, please provide this/these scenario(s).

Issue 2.1-Energy Probe-8

Reference: Submissions on the ETS Rate, Attachment 1, Elenchus ETS Rate Cost Allocation Report, July 21, 2021, Tables 8 -12

Preamble: These requests are directed to both Elenchus and the IESO (as source of data)

- a) Please provide a table showing historic and expected future intertie capacity for Ontario up to 2027.
- b) Please update relevant Elenchus tables for the historic 1CP and 12CP actuals for 2020 and 2021 actuals.
- c) Please update Tables 11, 12 for actuals.
- d) Please recalculate the Elenchus ETS results if the updated inputs have affected the results by more than 5%.

Issue 2.1-Energy Probe-9

Reference: Submissions on the ETS Rate, Attachment 2, Charles River Associates Jurisdictional Review, Appendix A-Expanded Summary of 2020 ETS rates

- a) Please update the ISO/RTO ETS Rate data for 2020 and 2021 for all Ontario-interconnected jurisdictions, Provide in tabular form.
- b) Please clarify why TransEnergie is listed on the same basis as ISOs (it is a Transmission company/exporter not an ISO).
- c) Please provide a schedule that shows the \$/MWhDay and \$/MWh ranges for Firm and Non-firm On-peak and Off-peak ETS for the 6 US ISOs and for the Canadian ISOs (Alberta and Ontario) and TransEnergie (Quebec).
- d) What ETS rates are charged in British Columbia?

- e) Does CRA have a recommendation for an Ontario ETS rate? If so, please provide this, with whatever caveats that may apply.

Issue 2-Energy Probe-10

Reference: Submissions on the ETS Rate, Attachment 2, Charles River Associates Jurisdictional Review, Appendix A-Expanded Summary of 2020 ETS rates

- a) Please provide bar charts showing:
 - i) Network Rates \$/MWh for each Province. For Alberta use the nearest Proxy.
 - ii) PTP rates.
- b) Please provide the Range for Network Rates and the average.
- c) Please comment on Ontario's Position in the Provincial Cohort

Issue 2.2: Should a settlement-based approach be permitted?

No Questions

Issues 2.3: What other methods for setting the ETS rate should be considered?

No Questions