Ontario Energy Board | Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2021-0243

ONTARIO ENERGY BOARD

Generic Hearing on Uniform Transmission Rates-Related Issues and the Export Transmission Service Rate

BEFORE: Lynne Anderson
Presiding Commissioner

Pankaj Sardana
Commissioner

Anthony Zlahtic
Commissioner

November 24, 2022

Ontario Energy Board | Commission de l'énergie de l'Ontario

TABLE OF CONTENTS

1 OVERVIEW

This is a Decision by the Ontario Energy Board (OEB) on the first phase of a hearing commenced on its own motion under sections 19, 21 and 78 of the *Ontario Energy Board Act, 1998* to consider various issues related to Ontario's Uniform Transmission Rates (UTR). The first phase of the hearing focuses on reviewing and setting the Export Transmission Service (ETS) rate.

In this Decision the OEB makes the following key determinations:

- The OEB will set an ETS rate. The OEB concludes that there should be no "free riders" on the transmission system.
- The OEB is adopting the cost-based methodology provided in the report by Elenchus: *Export Transmission Service Rate Cost Allocation Methodology* (2021 Methodology), but has given consideration to the electricity market design in Ontario and market conditions when determining how costs for the domestic transmission network are allocated. The OEB will apply a 20% allocation factor for network costs. This results in an ETS rate of $1.78/MWh.[1]
- The new ETS rate will be effective January 1, 2023 and will remain at that level for two years for a period of stability. Effective January 1, 2025, the ETS rate will escalate annually based on the Revenue Cap Index (RCI) for Hydro One's transmission business.

[1] Undertaking JT 2.3.

2 CONTEXT AND PROCESS

Hydro One Networks Inc. (Hydro One) filed an application with the OEB on August 5, 2021, for approval of its 2023-2027 transmission and distribution rates.[2] Included in that application was evidence filed by Hydro One related to the ETS rate. Subsequently, the OEB decided to address the ETS rate through a generic proceeding to lend focus to the issue and facilitate participation by transmitters and other stakeholders.

The OEB issued a Notice of Hearing for the Generic UTR Issues proceeding on October 15, 2021. On November 30, 2021, the OEB issued Procedural Order No. 1, which established the timetable for a written interrogatory process and approved parties as intervenors. The approved intervenors in this proceeding are:

- Anwaatin Inc. (Anwaatin)
- Association of Major Power Consumers in Ontario (AMPCO)
- Association of Power Producers of Ontario (APPrO)
- Consumers Council of Canada (CCC)
- Canadian Manufacturers & Exporters (CME)
- Energy Probe Research Foundation (Energy Probe)
- ENWIN Utilities Ltd. (ENWIN)
- Hydro One
- Independent Electricity System Operator (IESO)
- London Property Management Association (LPMA)
- Niagara-on-the-Lake Hydro Inc.
- Ontario Power Generation Inc. (OPG)
- Mr. Naren Pattani
- Pollution Probe
- Power Workers' Union (PWU)
- School Energy Coalition (SEC)
- Vulnerable Energy Consumers Coalition (VECC)

OEB staff also participated in the proceeding.

The OEB issued its Decision on the Issues List on January 28, 2022. Interrogatories were submitted by intervenors and OEB staff by March 28, 2022. Hydro One and the IESO provided responses to the interrogatories on May 13, 2022.

[2] EB-2021-0110.

On April 1, 2022, the OEB issued Procedural Order No. 2, in which the OEB accepted APPrO's proposal to file expert evidence from their consultant, Power Advisory, and established a timetable for the filing of this evidence, interrogatories on the expert evidence, a technical conference, a presentation day, and an untranscribed discussion among parties.

APPrO filed expert evidence in this proceeding on May 27, 2022. Interrogatories were submitted by intervenors and OEB staff on the APPrO evidence by June 17, 2022. APPrO provided responses to the interrogatories by July 8, 2022.

A technical conference was held on July 28 and 29, 2022; the presentation day was held on August 4, 2022; and the untranscribed discussion among intervenors and OEB staff was held on August 8, 2022.

In Procedural Order No. 3, issued August 26, 2022, the OEB revised the timelines for the filing of submissions as requested by VECC. Intervenors and OEB staff filed submissions on September 6, 2022, and responses to the submissions on September 26, 2022.

3 DECISION ON THE ISSUES

3.1 Background

History of the ETS Rate

As part of the regular operation of Ontario's electricity market, Ontario imports and exports electricity on an hour-by-hour basis across interties with two Canadian provinces (Manitoba and Quebec) and three U.S. states (Minnesota, Michigan, and New York).

The Ontario ETS rate set by the OEB is applicable "for the use of the transmission system in Ontario to deliver electrical energy to locations external to the Province of Ontario, irrespective of whether this energy is supplied from generating sources within or outside Ontario."[3]

The OEB approved Ontario's first ETS rate of $1/MWh on May 26, 2000, in its decision on Hydro One's transmission revenue requirement application for the year 2000.[4]

Since that time, the ETS rate has been set in Hydro One's transmission rates revenue requirement proceedings, including in 2007, 2010, 2013, 2015 and 2020.[5] Areas of review have included its purpose, methodology, proposed rate options, comparison to other jurisdictions and impact on electricity markets. Once approved, Hydro One's revenue requirement, which incorporates the impact of external revenue earned from ETS, is incorporated into the OEB-approved UTRs.

As part of the proceeding for Hydro One's 2011 and 2012 transmission revenue requirement and rates, Charles River Associates (CRA) was retained to prepare a qualitative analysis of the future effect of several ETS rate scenarios, with respect to exports and wheel-through volumes, ETS tariff revenue, and the Hourly Ontario Energy Price (HOEP). The OEB increased the ETS rate to $2.00/MWh for 2011 and 2012, based on the directional preference of the CRA study, and the absence of any particular analytical underpinning for the then-current rate. The OEB also made it clear in that

[3] 2022 Ontario Uniform Transmission Rate Schedules, EB-2021-0276.
[4] RP-1999-0044. Ontario Hydro Networks Company Transmission Cost Allocation and Rate Design. May 26, 2000. Hydro One was called "Ontario Hydro Networks Company" when it filed RP-1999-0044.
[5] EB-2006-0501, EB-2010-0002, EB-2012-0031, EB-2014-0140, EB-2019-0082.

decision that subsequent panels assessing the level of this rate should not regard the new rate as having any particular precedential value.[6]

In 2012, CRA further reviewed tariff rates and structures in neighbouring markets.[7] CRA also assessed several proposed rate options. In its June 2013 decision, the OEB directed Hydro One to "perform a cost allocation study to establish a cost basis for the ETS rate" in its next cost of service transmission rate application.[8]

In response, Hydro One submitted an ETS rate cost allocation study, prepared by Elenchus Research Associates Inc. (Elenchus), as part of its 2015-2016 transmission revenue requirement application.[9]

Elenchus recommended an ETS rate of $1.70/MWh for 2015 and 2016 as reflective of the cost of providing ETS, based on its proposed methodology. For the purpose of reaching a settlement, all parties agreed to an ETS rate of $1.85/MWh "on the understanding that the methodologies, assumptions and scenarios used in the Elenchus study does not have precedential value and may be challenged in subsequent proceedings."[10] The OEB approved the settlement of the $1.85/MWh ETS rate for 2015 and 2016. The OEB has subsequently approved the continuation of the ETS rate at $1.85/MWh to the end of 2022.

Evidence in Current Proceeding

Hydro One filed evidence relating to the ETS rate as part of its application in the EB-2021-0110 proceeding, including:

- A cost allocation study prepared by Elenchus
- An ETS jurisdictional review prepared by CRA
- A commentary prepared by the IESO on the implications of changes to the ETS rate for Ontario's electricity market

[6] EB-2010-0002, Decision with Reasons, p.75.
[7] EB-2012-0031, Exhibit H1, Tab 5, Schedule 2, Appendix B, Charles River Associates, Export Transmission Service (ETS) Tariff Study, May 16, 2012.
[8] EB-2012-0031, Decision and Order, June 6, 2013.
[9] EB-2014-1040, Exhibit H1, Tab 5, Schedule 1, Attachment 1, Elenchus, Export Transmission Service Rate - Cost Allocation Methodology, May 7, 2014.
[10] EB-2014-0140, Hydro One Networks Inc., Test Year 2015 and 2016 Transmission Rates Settlement Agreement, p.25.

This evidence was placed on the record of the current proceeding. Furthermore, the OEB requested that Hydro One and the IESO provide clarification of their recommendations for the ETS rate. Hydro One and the IESO subsequently filed a joint submission regarding the ETS rate (Joint Submission).[11] The Joint Submission document includes (a) a summary of relevant background information regarding the ETS rate, (b) clarifications from Hydro One and the IESO as to their respective recommendations on the ETS Rate, and (c) copies of three reports relating to ETS rates which were previously filed in the EB-2020-0110 proceeding.

Elenchus 2021 Cost Allocation Study

The 2021 Elenchus cost allocation study (Elenchus 2021 Study) in this proceeding is an update to its 2014 cost allocation methodology (Elenchus 2014 Study). This update considered:

- Direction from the OEB to Hydro One to review the allocation of shared network asset-related costs to exports
- The OEB's March 22, 2018, *Report on Pole Attachment Charges*[12]
- Elenchus' jurisdictional review of cost allocation methodologies
- The IESO's treatment of exports
- Export service curtailment in recent years and expected near-term curtailment

In its decision on Hydro One's 2020 to 2022 transmission rate application, the OEB directed Hydro One to undertake further work on developing a cost-based ETS rate. Specifically, the OEB stated that:

> Hydro One supported intervenor arguments that a cost allocation methodology that includes the allocation of shared network costs to exporters should be provided in Hydro One's next transmission rebasing application. The OEB agrees. This study should include different scenarios to take into consideration the fact that exporters do not receive the same priority access as domestic service until they are scheduled. The OEB agrees with the OEB panel for the ETS Decision that export service should continue to be viewed as a separate

[11] Hydro One and IESO Joint ETS Rate Submissions, October 14, 2021.
[12] EB-2015-0304, Report of the Ontario Energy Board, Wireline Pole Attachment Charges, March 22, 2018.

> class. This study should be filed with Hydro One's next transmission rebasing application.[13]

The OEB also stated that:

> Shared network facilities have been paid for by domestic customers. The OEB has determined that the use of shared network facilities by exporters needs to be considered in setting the ETS rates.

The Elenchus 2021 Study stated that it discussed with the IESO how exports are treated in Ontario compared to domestic customers. The IESO considers exporters to be a "curtailable" class. The IESO quantified for Elenchus the number of hours per year when exports were curtailed from 2016 to 2020, as well as the number of peak hours when exports were curtailed.[14]

More details about Elenchus' methodology are provided in Section 3.3 of this Decision.

CRA Jurisdictional Review

Hydro One engaged CRA to update its jurisdictional review to reflect current export transmission service rates in other jurisdictions, the rationale behind those rates and how market implications are considered in the setting of export transmission service rates in those jurisdictions. Most jurisdictions included in the 2021 CRA study apply Open Access Transmission Tariff (OATT) rates for export services, which promote competitive and non-discriminatory transmission access. All Canadian provinces operate within the OATT framework except Ontario and Alberta.

IESO Commentary

In its commentary, titled *Market Implications of the ETS Rate*, the IESO provided an overview of intertie trading in Ontario and discussed the implications of an increased ETS rate for the Ontario market.

The IESO introduced the fact that in addition to paying the ETS rate, intertie traders exporting energy from Ontario pay the Intertie Congestion Price (ICP). The ICP is a dynamic pricing mechanism administered by the IESO that allocates access to interties when there is more demand than capability.[15] The IESO also commented that the

[13] EB-2019-0082, Decision and Order, April 23, 2020, p.180.
[14] Elenchus ETS Rate Cost Allocation Report, July 21, 2021, p.23.
[15] Hydro One and IESO Joint ETS Rate Submissions, October 14, 2021, Attachment 3, p.2 and Exhibit JT-1.3, p.8.

market implications of a higher ETS rate would be expected to include a reduction of exports, a decrease in ICP revenues, and a reduction in the operational and economic benefits that exports provide.[16]

APPrO's Expert Evidence

On May 27, 2022, APPrO submitted a report titled *Expert Report for the Market Impacts of Changes to the ETS Rate*, which was prepared by Power Advisory.

In its report, Power Advisory provided comments on Elenchus' proposed methodology. Power Advisory also described its analysis of the financial impact of raising the ETS rate, consistent with the Elenchus methodology options, and of lowering the ETS rate to $0/MWh.[17]

In not accepting Elenchus' cost allocation methodology, Power Advisory concluded that:

> Overall, a large increase in the ETS rate will likely increase total system costs that will have to be recovered from Ontario ratepayers and result in higher rates. While the shifting of fixed costs to exporters through a higher ETS rate may initially appear to be beneficial for Ontario ratepayers, the reality is that it may reduce the province's ability to economically manage its baseload and sub-marginal cost supply, leading to greater curtailment (and domestic costs) ….
>
> Conversely, a reduction in the ETS rate to $0/MWh over the 2018 to 2021 timeframe is likely to have reduced total system costs for Ontario ratepayers.[18]

3.2 Continuation of Export Transmission Service Rate

The first issue on the OEB-approved issues list for this proceeding is whether it is appropriate to continue to rely on an ETS rate and on ICP to charge for export service.

OEB staff and all parties except Pollution Probe and APPrO supported the continuation of a non-zero ETS rate. Those in favour of continuing a non-zero ETS rate provided the following main points:

[16] Hydro One and IESO Joint ETS Rate Submissions, October 14, 2021, pp.10-11, and Attachment 3, pp.2-3.
[17] Power Advisory, Export Report for the Market Impacts of Changes to the ETS Rate, May 2022, pp.5-6.
[18] Power Advisory, Export Report for the Market Impacts of Changes to the ETS Rate, May 2022, p.46.

- ETS and ICP do different things, one is not a substitute for the other:
    - ETS rates recover transmission costs from exporters. It is a regulated rate that reduces transmission costs for domestic users.
    - The ICP is market-driven, based on the willingness of an exporter to pay when interties are congested. The ICP should be thought of as part of the price that exporters pay for energy, not a payment for their use of the transmission system. Exporters only make one bid into the energy market for the cost of the commodity, which includes what the exporter is willing to pay to export energy through a specific intertie.
- Non-congested volumes do not generate any ICP revenues from exporters. The ETS rate generates revenues from any use of the transmission system. Exporters make use of both the transmission network and interties for their exports, and therefore should pay for both.
- Several parties argued that everyone who uses a system should pay their allocated share of it, and the OEB should give weight to the "no free riders principle". SEC and Mr. Pattani cited evidence that between 2017 and 2021, more than half of export volumes were not subject to congestion and were not subject to any ICP.
- Some parties also noted a 2019 report of the Brattle Group which commented that congestion costs "are not costs that are associated with the physical transmission system, but instead are costs of the *energy* that is sent through the system."[19] (Emphasis in original).
- Eliminating the ETS rate would result in cross-subsidization from transmission ratepayers to the energy market, which is counter to the electricity deregulation objective of separating transmission and energy businesses; would reduce cost transparency; and would be contrary to ratemaking principles of user pay, cost causality, and fairness. Hydro One submitted that only ETS revenues specifically offset transmission costs for Ontario customers, and ICP offsets costs in the electricity market.

[19] The Brattle Group, *Analysis of the TRCA Surplus Allocation Methodology, Prepared for the Ontario Independent Electricity System Operator*, October 4, 2019, p.19.

- ICP revenues that are disbursed through the Transmission Rights Clearing Account (TRCA), and are credited to domestic customers, are reflected on customers' bills through Account 1580 (Wholesale Market Service Charges), which is allocated differently than transmission costs through the uniform transmission rates (UTRs) or retail transmission rates (RTSRs).

The IESO supported the continuation of the ETS rate. The IESO noted that the combination of the ETS and ICP has been in place since market opening and is well suited to the unique characteristics of the Ontario system. The fixed ETS has provided Ontario with a degree of revenue certainty from exports while allowing the dynamic ICP to extract the highest value possible from each export transaction.

The IESO disagreed with the characterization of exporters as free riders because they must compete in a marketplace that maximizes the amount that they are willing to pay for any given transaction. The IESO stated that exports contribute to the cost of the Ontario transmission system through both the ETS and the ICP, although the two mechanisms differ.

In contrast to the submissions described above, Pollution Probe and APPrO each submitted that the ETS rate should be reduced to zero.

APPrO disagreed that the ICP should be thought of as part of the price that exporters pay for energy, stating that the IESO's intertie zonal price that is used to establish the ICP is only higher than the hourly Ontario energy price (HOEP) because of limited capacity on the interties. APPrO summarized the evidence supporting its submission that the purpose of the ICP is "to allocate scarce transmission system intertie capacity through price signals when an intertie is congested."[20] APPrO also reiterated that if the ETS rate were set based on Elenchus' methodology, exporters would be paying twice for intertie capacity, once through the ETS rate and once through the ICP.

APPrO submitted that both the IESO evidence and the Power Advisory Report showed that a non-zero ETS rate would prevent some otherwise economically efficient exports to flow, reducing the value of exports to Ontario's domestic consumers.

[20] APPrO Responding Submission, September 26, 2022, pp.13.

APPrO also disagreed with the use of the no free riders principle. APPrO submitted that the argument that exporters may otherwise benefit from the transmission system without paying for it "is not sufficient reason to justify the imposition of an ETS rate when the evidence demonstrates that Ontario consumers would, in the aggregate, be economically worse off by doing so."[21] APPrO pointed to Power Advisory's description of exports as an "opportunity service" that will only use excess transmission capacity that is inefficiently being used by domestic customers and submitted that there is no cost causation by exporters.

VECC submitted that APPrO's argument that there is no cost causation is based on a narrow definition. A broader interpretation would be based on the "user pay" / "user benefit" principle, as well as the OEB's 2019 decision on ETS rates that determined that the use of shared network facilities by exporters should be considered in setting ETS rates.

Pollution Probe submitted that an ETS of zero would enable the IESO to continue to use exports as a tool to manage supply and demand, in addition to generating net economic benefits for Ontario ratepayers. Pollution Probe also stated that a zero ETS rate reduces administrative costs and simplifies market transactions. A reduction of market barriers would support Distributed Energy Resources (DERs).

Hydro One responded to Pollution Probe noting that it has not been demonstrated that a zero ETS rate is needed to maintain the level of benefits currently or historically derived from exports in Ontario. Finally, Hydro One submitted that Pollution Probe did not provide any evidence to support its assertion that a zero ETS rate will remove barriers for DERs in Ontario.

APPrO submitted that it is not appropriate to continue to rely on an ETS rate and on ICP to charge for export services because electricity exporters' use of the Ontario transmission system is subject to competition through the ICP mechanism sufficient to protect the public interest. APPrO submitted that the OEB "has a positive obligation to refrain from establishing any rate for exports use of the transmission system pursuant to section 29(1) of the OEB Act."[22]

[21] APPrO Submission, September 6, 2022, p.13.
[22] APPrO Submission, September 6, 2022, pp.5,8,10.

Section 29(1) of the OEB Act provides that:

> On an application or in a proceeding, the Board shall make a determination to refrain, in whole or part, from exercising any power or performing any duty under this Act if it finds as a question of fact that a licensee, person, product, class of products, service or class of services is or will be subject to competition sufficient to protect the public interest.

APPrO submitted that the relevant product market is the use of transmission capacity for exports, and that this market meets the two-part test for exercising forbearance under section 29 of the OEB Act, as set out by the OEB in the Natural Gas Electricity Interface Review proceeding.[23] APPrO submitted that the issue of whether exporters' use of the transmission system is subject to competition through the ICP mechanism that is sufficient to protect the public interest under Section 29(1) of the OEB Act is a "threshold issue" that the OEB must consider before considering issues put forward in the other submissions.

In their responding submissions, SEC, Hydro One, VECC, and OEB staff submitted that APPrO's section 29 argument should be rejected. SEC and Hydro One submitted that APPrO raised the issue of forbearance too late in the proceeding to allow for the appropriate procedural steps. These parties also submitted that APPrO's argument is flawed because it has not considered the differing purposes of the ICP and the ETS rate and has incorrectly applied the elements of section 29(1).

SEC and OEB staff submitted that the OEB does not regulate exporters, set ICP prices, or allocate access to the interties. SEC submitted that the fact that the users of a service engage in competitive activities is not the same thing as the service itself being competitive. It is the use of the transmission system that the ETS rate is intended to cover.

[23] Natural Gas Electricity Interface Review, EB-2005-0551. The OEB established a two-part test. The first part of the test requires an assessment of whether there is competition in the relevant market. The second requires an assessment whether the level of competition is or will be "sufficient to protect the public interest".

OEB staff compared the circumstances of Ontario's non-regulated natural gas storage services with the regulation of export transmission service. It noted that parties wanting to access the non-regulated gas storage capacity must compete for it, similar to the competition between electricity exporters for access to the province's interties during periods of congestion. However, parties accessing the competitive gas storage capacity must still pay regulated rates to transport gas to and from the storage facilities.

CRA's Evidence

Several parties noted that CRA's evidence showed that while the ICP is unique to Ontario, other jurisdictions address the cost of congestion from exporters through locational marginal pricing (LMP), which does not currently exist in Ontario. These parties pointed out that none of the jurisdictions which have LMP consider the congestion costs collected through LMP to be an offset to transmission costs or intertie costs and almost all those jurisdictions also charge exporters a cost-based rate for use of the transmission system.

SEC noted that, according to the CRA report, in most other jurisdictions it surveyed there is no distinction between the rates domestic and export customers are charged for use of the transmission system. Most are well above the current $1.85/MWh ETS rate. Where there is a difference between classes of customers, it is usually based on a reciprocal arrangement between jurisdictions. Hydro One and Mr. Pattani noted that the CRA review did not find any jurisdiction with a "zero" regulated transmission network charge for export out of state or province.[24] Hydro One also noted that all neighbouring jurisdictions to Ontario have some form of rate for export transmission service which is linked to the recovery of a portion of the local transmitters' revenue requirements.

APPrO disagreed with the argument that other jurisdictions extract the same value as the ICP from exporters through the LMP. APPrO made the point that the IESO's Market Renewal Program, which the IESO is currently preparing to implement, includes the introduction of LMP in Ontario. If the argument were correct then the IESO would be able to eliminate ICP with the introduction of LMP; however, the *Single Schedule Market High-Level Design* published by the IESO in August 2019 states that the IESO is proposing to retain the ICP after the introduction of LMP. APPrO submitted that this demonstrates that the ICP and LMP "are fundamentally different." APPrO further

[24] Hydro One Submission, September 6, 2022, p.5; Pattani Submission, September 6, 2022, p.2.

submitted that the distinction between LMP and ICP is also reflected in the financial instruments that are offered to hedge the underlying risk.

APPrO noted that while the U.S. jurisdictions considered by CRA have largely recovered costs for use of the transmission system on a cost-basis, CRA also acknowledged that none of those other jurisdictions have anything equivalent to Ontario's market-based ICP mechanism. APPrO submitted that a comparison to those other jurisdictions is therefore not helpful to address whether it is appropriate to continue to rely on an ETS rate and ICP to charge for export service because the existence of ICP makes Ontario's circumstance unique and a unique approach is required.

Power Advisory's Evidence

In its report, Power Advisory analyzed Ontario's energy exports in the 2018-2021 period and determined that had the ETS rate been set higher than $1.85/MWh, the incremental revenue from the higher ETS rate would be more than offset by an increase in related costs, including a reduction in congestion rents, and an increase in curtailed energy from baseload supply.

Power Advisory also determined that setting the ETS rate to $0/MWh over the same period would have resulted in "a net benefit for Ontario ratepayers, as the higher congestion rents and system-wide benefits offset the reduction in ETS-related revenues."[25]

Several parties submitted that Power Advisory's analysis reflects past conditions, and does not reflect potential future changes, such as changes to Ontario's electricity market, the amount of intertie capacity, and the demand and supply mix in Ontario or adjoining markets. This means that lowering the ETS would not necessarily be advantageous going forward.

SEC pointed out that half of the four-year period analyzed by Power Advisory was during the COVID-19 pandemic, when decreased electricity demand led to increases in surplus baseload generation in Ontario, as well as surplus generating capacity in neighbouring jurisdictions. SEC also submitted that in coming years the OEB may make changes to OPG's Surplus Baseload Generation Variance Account and the Hydroelectric Incentive Mechanism that would have a material impact on the need for exports to reduce hydroelectric spill and that the financial impact of hydroelectric spill

[25] Power Advisory Submission, May 2022, p.10.

that would occur from changes in export volumes is a significant factor in Power Advisory's analysis.

SEC also submitted that Power Advisory's methodology significantly overstated the financial impact of a change in the ETS rate. SEC said the problem with data used by Power Advisory is that it assumes a direct relationship between HOEP and export volumes, but the R^2 value of this relationship is only 0.077, therefore this direct relationship cannot be assumed. Both SEC and OEB staff noted that there was no sensitivity analysis done on the results, and this reduced the insight that could be drawn from Power Advisory's estimates. SEC and VECC provided confidential calculations to demonstrate how Power Advisory's results overestimated the impact of a higher ETS rate.

In its responding submission, APPrO submitted that SEC's approach is flawed because it ignores the price elasticity of export volumes within each pricing bucket. APPrO disagreed with the criticism that Power Advisory's evidence did not account for uncertainty about the future. APPrO submitted that when deciding whether a class of services is subject to competition sufficient to protect the public interest, the wording of Section 29(1) of the OEB Act allows for the use of historical evidence and data and analysis of future conditions is not required. APPrO also submitted that if the OEB decides that there is insufficient evidence to assess the applicability of Section 29(1) of the OEB Act, the OEB should undertake an additional discovery process to ensure that it gives all the parties an opportunity to present expert evidence.

APPrO also disagreed with arguments that Power Advisory's evidence should be discounted due to the presence of uncertainties and approximations. APPrO pointed out that Power Advisory was accepted as an expert in energy market and energy policy analysis and submitted that, with the exception of the IESO, Power Advisory is best positioned to comment on the impact of exports on the system.

APPrO submitted that the Power Advisory study used the best available historical data and can and should help inform OEB decision making. APPrO also submitted that it is a breach of the accepted prohibition against the introduction of new evidence in argument for SEC and VECC to introduce new confidential calculations and analysis in their arguments. APPrO further submitted that Power Advisory witnesses did not have a chance to respond to this new material on the record. APPrO submitted that the OEB

should disregard, or limit consideration of, the new “evidence” filed by SEC and VECC and associated arguments.[26]

Findings

The OEB will set an ETS rate. The OEB concludes that there should be no “free riders” on the transmission system. In continuing to set an ETS rate, the OEB’s assessment is that the ETS rate and the ICP mechanism are pricing mechanisms that signal fundamentally different aspects of how the transmission system is used for export transactions. The OEB accepts that the ETS rate is a charge for the use of the transmission system for exports, whereas the ICP mechanism is a market-based pricing framework intended to efficiently ration constrained transmission capacity. The OEB finds that it is appropriate to consider both ETS and ICP to (a) fairly price the use of Ontario’s transmission system; and (b) determine the manner in which the demand for scarce transmission capacity on specific transmission corridors is efficiently priced and allocated to exporters at specific points in time.

APPrO argued that as a threshold question the OEB should determine whether to refrain from setting an ETS rate because there is sufficient competition to protect the public interest through the ICP. The OEB disagrees. The ETS rate is for the use of the transmission system, which is a monopoly service used by both domestic customers and exporters. The exporters using this transmission system are engaged in competition. That does not make the use of the transmission system a competitive service.

APPrO also argued that the OEB should disregard the calculations by SEC and VECC based on the Power Advisory evidence. While the OEB agrees that further analysis to test Power Advisory’s assumptions could be helpful, the OEB acknowledges that Power Advisory and other stakeholders did not have the opportunity to test that analysis through the discovery process. Therefore, the OEB has given the calculations little weight.

The OEB found the evidence from CRA helpful to understand the differences between Ontario and other jurisdictions, in particular that no neighbouring jurisdictions have an ICP mechanism. This uniqueness supports an approach that considers both the transmission system and market operations when setting the ETS rate.

[26] APPrO Responding Submission, September 26, 2022, pp.9-10.

3.3 Approach to Setting Export Transmission Service Rate

3.3.1 Cost Allocation

Elenchus 2014 Cost Allocation Methodology

The Elenchus 2014 Study proposed a cost allocation methodology to determine the ETS rate. The main characteristics of Elenchus' recommended methodology were that:

- Dedicated export network asset costs were allocated to the export customer class
- Export customers were considered "interruptible", and therefore, no shared network asset-related costs were allocated to the export customer class
- Shared network operations, maintenance and administration (OM&A) costs were allocated to export customers
- 12 Coincident Peak (12CP) was used as the allocator. The 12CP allocator is the sum of the demand for each customer class at the hour of each month's maximum system demand using the last year for which information was available.[27]

Elenchus 2021 Cost Allocation Methodology

For the Elenchus 2021 Study, the cost allocation methodology was updated with respect to shared network asset-related costs. Specifically, Elenchus stated that:

> Since exporters are able to use the transmission system much of the time, even at the times of Ontario system peak, Elenchus believes that a reasonable basis exists for Shared Network Asset-related costs to be allocated to exports based on the principle of cost causality.[28]

According to Elenchus, in 2019 and 2020 exports were curtailed close to 20% of the time. In the five peak hours in each of the past five years, exports were curtailed in 11 out of the 25 hours and 10% of volumes were curtailed in those hours.[29]

Accordingly, augmenting Elenchus' 2014 cost allocation methodology to add a methodology for allocating shared network asset-related costs to export customers was

[27] Elenchus ETS Rate Cost Allocation Report, July 21, 2021, pp.11 and 16-18.
[28] *Ibid*, p.6.
[29] *Ibid*, p.5.

a focus of the Elenchus 2021 Study. Elenchus described this as "taking into consideration the fact that exporters do not receive the same priority access as domestic service until they are scheduled."[30] Elenchus provided three such methodology options in its report. These options are described in Section 3.3.2, below.

Elenchus also stated that, if export customers are allocated a portion of Shared Network Asset-related costs, then export customers should also be allocated a portion of external revenues received by Hydro One for use of their assets. Elenchus recommended that full external transmission revenues be allocated by the same methodology as shared network asset-related costs.

OEB staff and most parties supported the use of a cost-based approach to set the ETS rate. It was noted that the OEB has stated in past decisions that it is seeking a cost-based ETS rate. Some parties argued for the use of a fully allocated cost-based methodology and that there is no justifiable reason for domestic volumes and export volumes to be treated differently with respect to the use of the same transmission assets. OEB staff submitted that a cost-based approach is fair because it aligns with cost causality principles. In the case of the ETS rate, a cost-based approach aligns with the principle of "user pay" or "no free rider": it assigns costs to those who use the Ontario transmission system in proportion to their use of it. A cost-based approach is also transparent because it relies on inputs that are generally available, and which are accessible by the public. It also involves a rate-setting process that is "public, participatory and which allows for scrutiny of evidence and arguments."[31]

However, several parties submitted that the cost-based approach should be balanced with other considerations as follows:

- The IESO submitted that the two competing objectives that the OEB was trying to balance when it established the ETS rate in 2000 – the recovery of a portion of the total transmission system costs from exporters while minimizing impediments to trade with other jurisdictions – remain relevant today. The IESO further stated that given the characteristics of the Ontario grid, the need to facilitate trade has increased significantly.
- The IESO argued that a solely cost-based approach to set the ETS rate would not be an optimal solution because this would not provide any consideration to the role that the ETS has in export volumes and would fail to consider other

[30] *Ibid*, p.5.
[31] OEB Staff Submission, September 6, 2022, p.5.

benefits that exports provide to Ontario, including any congestion revenue that results from the ICP, could result in increased costs for Ontario consumers. The IESO also noted that exports are not a primary driver of investment in the transmission system.

- Hydro One submitted that cost allocation should be used as a starting point; however, the ETS rate should balance recovery of an appropriate level of transmission costs from exporters with the objective of achieving broader cost and system benefits, including taking into consideration the potential impacts on the ICP. Hydro One submitted that rate design principles such as those of full cost recovery, fairness and efficiency are among the principles that the OEB should consider in determining the ETS rate.

- SEC submitted that the rate should be cost-based, while still considering the broader market implications affecting domestic customers. SEC submitted that, in addition to allocating a portion of intertie costs, a portion of shared network asset costs should be allocated to exporters because exporters use them to transmit export energy.

- CME submitted that the ETS rate should be informed, but not mechanistically determined, by cost allocation principles. The different level of service received by exports, the operational benefits provided by exports, and the additional ICP costs paid by exporters should also be considered when setting the ETS rate.

- Anwaatin submitted that the ETS should be set using a balanced approach, at a level that avoids material negative impacts to electricity reliability.

SEC and Mr. Pattani submitted that costs should be allocated to exporters in line with the "beneficiary pays" principle, referencing the U.S. Federal Energy Regulatory Commission's description that "The cost of transmission facilities must be allocated to those … that benefit from those facilities in a manner that is at least roughly commensurate with estimated benefits."[32] SEC also submitted that the OEB has applied the beneficiary pays principle in different contexts, and has adopted this beneficiary pays guiding principle to allocate costs for certain new infrastructure under the Transmission System Code.

[32] SEC Submission, September 6, 2022, pp.8-9; Pattani Submission, September 6, 2022, p.8.

Anwaatin submitted that the approach used to set the ETS rate should help to facilitate the efficient export of low-carbon electricity from Ontario into neighbouring jurisdictions with comparatively higher-emissions electricity systems.

The IESO agreed that a low ETS rate could assist in reducing regional emissions by facilitating the export of low carbon electricity from Ontario to neighbouring U.S. jurisdictions and, by extension, a higher ETS could increase regional emissions.

VECC noted that reducing emissions in other jurisdictions is not reflected in either the OEB's statutory objectives, or the Minister's current mandate letter to the OEB. VECC submitted that the impact on emissions should not be a primary consideration in setting the ETS rate.

APPrO submitted that if the OEB decided that a non-zero ETS rate should be continued, a principled cost-based approach should be used to establish the ETS rate.

Findings

The OEB agrees with using a cost allocation methodology as the basis for determining the ETS rate within the context of broader policy considerations currently facing Ontario's electricity grid. This point was also noted by Elenchus who pointed out that, while its latest study allocated shared network asset-related costs based on cost causality, the extent to which the OEB should change the ETS rate to reflect those network costs was a policy question for the OEB.

The OEB has opted to use a 20 percent allocation of network costs (inclusive of other transmitters' revenue requirements) underpinned by Elenchus' latest cost allocation methodology. The 20 percent weight has been deliberately set after considering broader policy issues (instead of one of the three scenarios initially undertaken by Elenchus in its 2021 Study). These policy considerations include accepting the IESO's evidence that the need for open power markets to facilitate trade has increased significantly due to the current characteristics of the Ontario grid, and that the Ontario electricity marketplace is in a period of transformative change and attendant uncertainty. Furthermore, given the (still) significant amount of surplus baseload generation, the IESO's Market Renewal Program, the need to procure significant amounts of generation, and uncertainty around the shutdown of the Pickering nuclear generating station, increasing the ETS rate to one of the rate levels suggested by Elenchus' three scenarios is not appropriate at this time.

The OEB found the study undertaken by Power Advisory and the evidence and submissions of the IESO helpful in its deliberations. The OEB accepts that there could

be an inverse relationship between the ETS rate and revenues collected via the ICP mechanism and accepts that increasing the ETS rate above $1.85/MWh could have an impact on ICP revenues. The OEB agrees with the IESO that the Power Advisory analysis would have benefited from consideration of price spreads between domestic and intertie markets and from a formal econometric analysis that yielded export and import price elasticities. Such a study would have complemented Elenchus' cost allocation study and presented a clearer statistical basis for determining impacts that a change in the ETS rate would have on export and import volumes. Absent such an analysis, the OEB is left with only a "directional" indication of the impact that a change to the ETS could have on export and import volumes.

3.3.2 Inclusion of Network Charge

The Elenchus 2021 Study provided three methodological options for setting the ETS rate, all of which result in increasing the ETS rate from the current $1.85/MWh.

Each of the options uses a forecast 2023 network revenue requirement for Hydro One and actual 2020 load and consumption data. Elenchus proposed that the three options be adjusted to include other transmitters' approved network revenue requirements. Elenchus noted that it made the same suggestion in its 2014 Study.[33] The rates described below reflect this adjustment.

The first option, known as the "Fully Allocated Model", allocates shared network asset-related costs using an unadjusted 12CP export allocator. The unadjusted export allocator captures curtailments to export demands that may have occurred during the coincident peak periods that were included in the 12CP calculations. Elenchus stated that the unadjusted 12CP allocation of shared network asset-related costs between domestic and export customers "will reflect each customer group's use of the transmission system, including the impact of service curtailment to export customers."[34] The Fully Allocated Model results in an ETS rate of $6.54/MWh.

The second option, known as the "Hybrid Model", discounts the export demand 12CP allocator by 50%, "as a proxy for a hybrid model, half-way between no allocation and full

[33] Elenchus' 2021 report shows that the adjustment from a rate based on Hydro One's 2023 network revenue requirement to a rate including the network revenue requirements of all transmitters, including Hydro One, amounts to an increase of 7.77%. Elenchus ETS Rate Cost Allocation Report, July 21, 2021, p.35.
[34] Elenchus, Export Transmission Service Rate Cost Allocation Methodology, July 21, 2021, p.29.

allocation" of shared network asset-related costs to exports.[35] The Hybrid Model results in an ETS rate of $3.66/MWh.

The third option, known as the "Curtailment Model", discounts the export demand 12CP allocator by 20% based on the service curtailment that affected exports in recent years. Assuming that exports were curtailed 20% of the hours in recent years, the model adjusts export demands to 80% of their actuals. In this way, the model allocates shared network asset-related costs to exporters based on 80% of the actual export class 12CP over the period considered. Elenchus stated that the Curtailment Model provided a more direct link between the reduction of shared network asset-related costs allocated to exports and the number of hours in which they are curtailed. The Curtailment Model results in an ETS rate of $5.42/MWh.

OEB staff and most intervenors supported the use of Elenchus' methodologies, at least as a starting point for setting the ETS rate, because using a fully allocated costing model as a starting point ensures an equitable treatment of customers and upholds the "no free riders" principle. Most of these submissions supported the Curtailment Model because it accounts for the different level of service received by the export class compared to the domestic class.

While there was significant support for Elenchus' methodologies, several parties supported a specific rate that was different from the rates that result from those methodologies. VECC and SEC separately proposed scaling Elenchus' results to account for additional factors. Both SEC and VECC submitted that the Curtailment Model is appropriate because it reflects the extent to which exports are subject to curtailment in Ontario.

SEC submitted that 20% is a reasonable amount to discount the share of network asset costs allocated to exporters. SEC argued that the difference in service between export loads and domestic loads is not significant because in the last five years for the top five peak hours, only in 11 of those 25 hours were some exports curtailed, and when they were, it only amounted to 10% of those scheduled.

SEC submitted that the OEB should initially set the ETS rate at the half-way point between the Elenchus Curtailment Model value of $5.42 and the current ETS rate, resulting in an ETS rate of $3.64/MWh. SEC submitted that this would appropriately balance ensuring exporters pay a share for their use of the transmission system, while

[35] *Ibid*, p.29.

recognizing the broad impacts a change may have to domestic customers on other parts of their bill, due to the unique nature of the Ontario electricity market.

VECC submitted that the ETS rate should initially be increased to $3.00/MWh. VECC argued that $3.00/MWh is less than one-third of the difference between the current $1.85/MWh rate and the $5.48/MWh rate that resulted from VECC's recommended adjustments to the Elenchus cost allocation methodology, and only slightly more than 50% of the $5.48/MWh. The $1.15/MWh increase is only slightly more than the $1.00/MWh increase approved by the OEB its 2010 decision.

Mr. Pattani noted that exports are curtailable and supported Elenchus's Hybrid Model as being a balanced approach. Mr. Pattani submitted that the ETS rate should be set at $3.66/MWh. Mr. Pattani also submitted that Elenchus' Curtailment Model may be reasonable to use in the future; however, if it were applied immediately it would result in a larger step change from the current $1.85/MWh rate.

Some parties recommended phasing-in changes to the ETS rate over several years. LPMA ultimately recommended a phased-in ETS rate increase starting at $2.00/MWh in 2023 and increasing by $0.50/MWh per year from 2024 to 2027, inclusive, resulting in a rate of $4.00/MWh in 2027.

OEB staff submitted that, given the uncertainties and risks, the precautionary principle ought to be considered when implementing changes to the ETS rate. OEB staff described the precautionary principle as the notion of 'better be safe than sorry' amidst a lack of categorical proof of some potential future harm. OEB staff submitted that power system operability is an important issue that warrants ongoing consideration and recognition.

OEB staff noted that increasing the ETS rate to $5.42/MWh would amount to an increase of 193% relative to the current rate. OEB staff submitted that the impact of this increase on the export class should be mitigated. OEB staff recommended phasing in an increase to the ETS rate over 12 years to recognize uncertainties around the potential electricity market and operability implications of an increase to the ETS rate; and to allow opportunity for learning and, if necessary, adaptation.

The IESO agreed with OEB staff that the precautionary principle should be applied in setting the ETS rate. The IESO stated that in its view, the evidence in this proceeding has not demonstrated that consumers will derive benefits from increasing the ETS rate above the current $1.85/MWh level that would be commensurate with the countervailing risks.

SEC and the IESO submitted that the OEB should reject the OEB staff proposed 12-year phase-in proposal because the ETS is less than 10% of the total amount collected from exporters and therefore does not require mitigation, and a lengthy phase-in means that the rate will never be cost-based.

The IESO submitted that a phase-in period is not consistent with the precautionary principle and does not address the IESO's concerns about the operability and economic risks associated with a higher ETS rate. The IESO submitted that an annual adjustment in the ETS rate is unnecessary because intertie trading is not directly impacted by inflationary pressures.

Hydro One did not make a submission on a specific ETS rate. Hydro One noted that the OEB's rate design process for electricity distribution rates is an example of a rate design process which does not recover 100% of the costs identified through a cost allocation study, but instead a range of revenue-to-cost ratios is considered acceptable by the OEB. Hydro One submitted that a similar methodology could be used for setting the ETS rate by limiting the changes to the ETS rate such that a revenue-to-cost ratio is within an OEB-prescribed range.

CME noted the number of unknowns and submitted that the ETS rate should be reduced to $1.50/MWh, to test whether this results in a net benefit to ratepayers, as expected by Power Advisory's analysis.

VECC disagreed with CME's proposal because any insight this might provide on the impact of a lower or higher ETS rates at the time of review may not be the same impact going forward. VECC also submitted that it is extremely complex to evaluate the impact of an ETS rate over a historical period relative to a hypothetical alternative rate.

Energy Probe stated that the ETS rate should fairly compensate ratepayers for the use of the transmission system and interties; however, it should not be a deterrent to export trading. Energy Probe submitted that the ETS rate should be increased to $2.00/MWh based on the current ETS rate of $1.85/MWh escalated by the approximate increase in Hydro One transmission rate base since the OEB's 2015 decision in which the $1.85/MWh rate was set. However, VECC responded that it was unclear how Energy Probe's number was derived because the Network Service charge has increased 44.4% since 2015.

APPrO submitted that a cost-based ETS rate should allocate the cost of dedicated interconnection assets to exports and imports using the intertie 12 CP allocator as recommended by Elenchus.

APPrO submitted that a maximum of 20% of shared network costs should be allocated to export customers in the cost allocation model because exports:

- Receive a lower level of service than domestic transmission customers
- Are not a driver of transmission investment decisions
- Provide economic, system and operational benefits beyond ETS revenues

APPrO also referenced an application to the Alberta Utilities Commission by the Alberta Electric System Operator (AESO) in which the AESO proposed a tariff for the Export Opportunity Service (XOS) rate on the basis that exporters would contribute 20% bulk system and local system fixed costs. In that application, the AESO stated that the charge in the proposed tariff reflected the historical basis for prior export opportunity rates.

VECC submitted that APPrO's proposed adjustments to Elenchus' cost allocation methodology should be rejected because this approach mixes issues related to cost causality/user pay with other considerations such as operational and system benefits. that are generally considered to be matters of rate design. VECC argued that the AESO's approach is the exception as opposed to standard utility practice and the factor used by the AESO is really 25%, not 20%.

During the Technical Conference, APPrO requested that Elenchus carry out specific analyses by way of undertaking to calculate the ETS using an allocation of 20% for network costs. This option would result in a decrease to the ETS rate from the current $1.85/MWh to $1.78/MWh.[36]

The IESO submitted that from a purely operational perspective, it would prefer an ETS rate of zero to reduce the risk of having to take control measures. However, it acknowledged that the risks are manageable at the current rate and it is not strongly advocating for an ETS rate of zero in this proceeding.

The IESO submitted that any increase in the current ETS rate above $1.85/MWh would be a concern for the IESO because in its operational experience, even a relatively small increase in the ETS rate could have a material impact on heavily traded interties such as New York where price margins are already small.

[36] Undertaking JT 2.3.

The IESO submitted that the evidence in this proceeding has not demonstrated that consumers will derive significant benefits from a higher ETS rate. The IESO stated its expectation that any additional revenue gained from an increase in the ETS rate would be largely offset by a reduction in congestion rents due to the inverse relationship between the ETS rate and the ICP.

SEC noted that the IESO filed no quantitative analysis to model the operational impacts of a change to the ETS rates, and it is not appropriate to set rates based on the comfort of the IESO with the current ETS rate.

Pollution Probe submitted that if the OEB decides to maintain an ETS rate greater than zero then the rate should be lower than the current $1.85/MWh. AMPCO submitted that the evidence did not provide sufficient rationale to justify changing the ETS rate from the existing $1.85/MWh level.

VECC noted the diverse interests in the proceeding and that the ultimate balancing of these considerations lies with the OEB.

Findings

As noted in Section 3.3.1, above, the OEB will apply a factor of 20% for the allocation of network costs inclusive of other transmitters' revenue requirements. The OEB agrees with Elenchus' position that if a portion of the network charge is allocated to exporters, then a portion of the external revenues should be allocated to them as well. This results in an ETS rate of $1.78/MWh.[37]

The OEB has heard the submissions of parties and OEB staff that the goal should be a fully-allocated cost that is phased-in over time. However, the OEB concludes that while the ETS should be based on the cost of the transmission system, consideration should also be given to market design in Ontario and market conditions, such as the level of surplus base load generation. Market conditions are discussed in more detail in the next section. Further, as noted by the IESO and APPrO in this proceeding, the transmission system in Ontario is unique in that exports:

- Are subject to curtailment and therefore the service to exporters has less certainty than the service to domestic transmission customers
- Are not a driver for transmission investment decisions

[37] Undertaking JT 2.3.

- Provide system, operational and economic benefits through ICP revenues credited to domestic and export customers through the IESO's disposition of the TRCA

Rate design can be complex, and often requires an element of judgment after the cost allocation exercise. As Mr. DesLauriers from CRA said at the Technical Conference:

> I would agree that rate design is complex. There is a cost allocation step that probably needs to take place first to establish the cost basis, but determining the proper rate to collect those costs, you know, is an art more than a science, and is a complex decision that has to take into account many competing objectives.[38]

The OEB has applied its judgement in how to balance the outcome of the cost allocation study with the impact of the ETS rate on the electricity market.

3.3.3 Consideration of Market Conditions

In its commentary on the market implications of the ETS rate, the IESO stated that:

> Revenue from the ETS is only one component of the value that Ontario receives from exports and historically has been the smallest component of the economic benefits associated with exports. When setting the ETS [rate], consideration should be given to maximizing the operational and economic benefits provided by exports by minimizing transaction costs. Any increase in the ETS rate will reduce the value of interties, leading to less system flexibility and higher costs for Ontario consumers.[39]

The IESO estimated that exports of energy from Ontario contributed between $330 and $520 million annually to Ontario between 2017 and 2021 in the form of congestion rent payments, ETS revenue, payment of uplifts and avoided system costs.[40]

The IESO also submitted that:

> Evaluating the risk associated with an increase of the ETS rate is particularly difficult at the present time as the Ontario market is facing a time of transformative change and attendant uncertainty in the years ahead due to, amongst other things, the emerging capacity need in 2025 (documented in the IESO's Annual Planning Outlook (the "APO")), the roll out of [the Market Renewal

[38] Transcript Technical Conference July 28, 2022, pp.79-80.
[39] Hydro One and IESO Joint ETS Rate Submissions, October 14, 2021, Attachment 3, p.3.
[40] IESO Submission, September 6, 2022, p.9.

> Program] by the IESO, and volatile commodity prices. … [E]xports have become increasingly important in recent years to ensure the reliable operation of the Ontario grid and any increase to the ETS [rate] would introduce additional uncertainty at a time when market participants are managing these changes. From the IESO's perspective, there is a need for stability in the market where possible and a strong desire to avoid unnecessary additional changes to the market during this period.[41]

Several parties submitted that it is appropriate to consider the market and operational impacts that the IESO described in the proceeding. Some argued that this is a reason to leave the ETS rate as is. However, several parties took issue with some aspects of these considerations.

SEC stated that it is understandable that the IESO will have a natural bias towards the operational implications, but if the IESO felt so strongly about the risks generated by a significantly higher ETS rate, it should have undertaken quantitative analysis to demonstrate with some certainty that the risk may materialize and impact its ability to manage the electricity system. SEC and VECC also submitted that when the OEB previously doubled the ETS rate from $1/MWh to $2/MWh, the IESO did not claim that this caused any material operational issues or financial impacts.

Several parties and OEB staff commented that recent experience cannot be used to predict the future benefit of exports to domestic customers. SEC cited the following reasons:

- Based on the IESO's 2021 *Annual Planning Outlook*, periods of surplus baseload generation, are expected to fall significantly.
- The IESO's forecast of surplus baseload generation is subject to further change due to changes in the IESO's supply procurement plans.
- The IESO's Market Renewal Program will be the largest change to Ontario's electricity market since market opening and both the IESO and Power Advisory note that market renewal may impact exports.

[41] IESO Submission, September 6, 2022, p.12.

- The biggest driver of export activity is the price spread, which is highly influenced by the specific market conditions in neighbouring jurisdictions, several of which are facing supply mix changes.

VECC agreed with the IESO that exports generate additional economic benefits for domestic consumers in addition to the revenues generated by the ETS rate. VECC acknowledged that the potential impact of a change in the ETS rate on these benefits should be considered by the OEB. VECC, however, did not accept the IESO's submission that a small increase in the ETS rate could have a material impact on Ontario's heavily traded interties, and submitted that the response to a higher ETS rate could be highly variable. In VECC's view, some of the benefits attributed by the IESO to intertie trading are related more to the existence of the interties than to the level of export volumes. However, VECC acknowledged that the ability to use exports to manage surplus baseload generation provides operational benefits. VECC stated that there is no magic number at which the ETS rate creates an unacceptable level of risk, and little insight into the impact of changing the ETS rate going forward with changing market/system conditions.

Mr. Pattani made many of the same points as SEC, OEB staff and VECC. Mr. Pattani also submitted that there were no objective, forward-looking assessments of the impact of the ETS rate on avoided system costs, and of future congestion rents in the proceeding and that uplift charges paid by exports should not be considered benefits or credits to domestic customers, but instead reflect the costs of facilitating export service.

OEB staff submitted that electricity market and operability implications ought to be considered when setting the ETS rate, but that neither the IESO nor Power Advisory had proven that increasing the ETS rate would result in increased curtailment of Ontario generation. OEB staff also submitted that the offsetting relationship between the ETS rate and the ICP increases the uncertainty around how much a change to the ETS rate would impact export volumes.[42]

In its responding submission, the IESO disagreed with OEB staff and noted that no party seriously challenged the IESO's evidence.

APPrO submitted that arguments that historical data may not be a good indicator of the future because the future will be different than the past should be rejected, because the same position is true for most OEB decisions. APPrO also submitted that any concerns

[42] OEB Staff Submission, September 6, 2022, p.18.

about the impact of changes to the ETS rate can be addressed through the process used to revisit and adjust the rate in the future.

Pollution Probe stated that arguments in support of a higher ETS rate are based on theoretical interpretations of siloed regulatory fairness and cost allocation principles, rather than real market impacts, public interest and what is needed in Ontario to meet consumer and policy needs. Pollution Probe further submitted that the IESO is in a unique position to understand how all the moving parts fit together and that strong consideration should be given to broader public and system benefits.

Findings

It is clear that there is significant surplus baseload generation in Ontario at this time, and that exports can assist with mitigating the cost of this surplus. An ETS rate that is too high may inhibit exports to the point of affecting the operation of the electricity market, which could increase costs to Ontario consumers. The OEB is therefore discounting the allocation of shared network costs of the transmission network from 100% to 20% in setting the ETS, as previously discussed in Section 3.3.2. The allocation of network costs could be adjusted in future proceedings if there is a material change in the market design or in the quantity of surplus baseload generation. The OEB has determined that it will consider the market design and conditions in the electricity market in setting the ETS rate, just as it expects that the IESO will consider the existence of the ETS rate in the design of the market.

The IESO has been working on a Market Renewal Program for several years. The most recent information released by the IESO revised the implementation date of the Market Renewal Program to May 2025.[43] Furthermore, the *Annual Planning Outlook* from the IESO forecasts a reduction in surplus base load generation in the future.[44] Both the Market Renewal Program and generation supply/demand balance may have an impact on exports in the future. This is expected to be a consideration when the OEB sets the ETS rate in the future. The OEB is satisfied that it is appropriate to wait to assess the outcomes from the transformative changes to the electricity market expected from the Market Renewal Program and the pace of energy transition, before considering a significant change to the ETS rate.

[43] Market Renewal Energy Project Implementation | Engagement Day September 22, 2022.
[44] IESO Annual Planning Outlook, December 2021, p.49.

3.3.4 Term of Rate

VECC submitted that the initial change to the ETS rate should occur six to 12 months after the Decision date, approximately mid to late 2023. VECC submitted that this timeline would give exporters time to adjust to the change.

OEB staff recommended that the current ETS rate of $1.85/MWh should be retained for 2023 to provide lead-time to affected parties. OEB staff suggested increasing the ETS rate to $2.15/MWh in 2024 and then implementing OEB staff's phase-in approach, increasing the ETS rate by approximately $0.30/MWh per year.

OEB staff acknowledged that its proposed approach does not account for changes in underlying transmission costs, including inflation. OEB staff stated that this was intended as a means of rate mitigation.

SEC, APPrO, Hydro One, and the IESO submitted that the implementation of any changes to the ETS rate should consider the impact on export transactions, noting that by the end of 2022, transmission rights will have been sold for the period ending December 31, 2023. Accordingly, the IESO and Hydro One submitted that a new ETS rate should not be implemented until January 1, 2024.

With respect to implementing a new ETS rate in conjunction with its 2023 transmission rates, Hydro One noted that in its joint transmission and distribution rate application that is currently before the OEB, Hydro One has assumed that the ETS rate will remain at the current level of $1.85/MWh.[45]

Hydro One responded to SEC's suggestion that new ETS rates should be implemented immediately following the closing of the September auction period, which Hydro One understood to mean October 1, 2023. Hydro One submitted that implementing a new ETS rate mid-year should be avoided as it would impact UTRs and may necessitate leaving UTRs interim until late in 2023 to enable them to be updated to reflect a change in the ETS rate as of October 1st. Hydro One submitted that any changes to the ETS rate should be made effective January 1st of a given year.

Hydro One proposed that:

- There be no annual mechanistic adjustments to the ETS rates for simplicity and stability

[45] Hydro One Responding Submission, September 26, 2022, p.22.

- The ETS rate be set every five years concurrent with Hydro One's transmission rebasing applications to balance having a rate that can be updated based on costs with an approach that does not impose excessive administrative costs
- The next review be a few years after the implementation of the IESO's Market Renewal Program
- The next review be through a generic hearing rather than Hydro One's next rebasing application

Many other parties also submitted that the ETS rate should be reviewed at the time of Hydro One's next transmission cost-based application, at which time there should be a better understanding of the implications of upcoming changes to the Ontario electricity market and supply mix. The IESO stated that setting the ETS rate for a five-year term would provide stability in the face of upcoming market and system changes and the associated uncertainty. Other submissions included:

- A shorter review term if there has been a material market or system change
- Having the next review a period of time after the Market Renewal Program is implemented
- Having the review six months to a year before Hydro One's next transmission rebasing application

VECC and LPMA submitted that at the time of the next ETS rate review the cost allocation study should be updated based on updated cost information from Hydro One's application. LPMA also submitted that it may also be necessary to phase-in any change to the ETS rate that results from the review to better understand the implications of upcoming changes to the Ontario electricity market and supply mix.

OEB staff submitted that the ETS rate should be reviewed every ten years, beginning in 2029, with OEB discretion to initiate interim reviews if required. OEB staff made the point that scheduling the review between Hydro One cost-based rate applications is advantageous to levelize the workload for all parties and allow for focus on the ETS rate.

APPrO submitted that the simplicity and certainty of a fixed and stable ETS rate is of "paramount importance" to exporters who must factor the ETS rate into decisions and their market behaviour. Mr. Pattani also submitted that the ETS rate should be held steady during the rate-setting term, to provide rate stability.

Several parties submitted that the ETS rate should be adjusted annually until the next review to avoid cross-subsidization between domestic and export customers when UTRs increase and the ETS rate does not.

SEC described two options for adjusting the ETS rate annually. First, the ETS rate could be adjusted using the same annual transmission Revenue Cap Index (RCI) adjustment that is approved for Hydro One. CME, VECC and LPMA supported this approach. Second, the ETS rate could be adjusted annually based on the percentage annual increase in the Network Service Rate component of the UTRs. SEC described the benefit of the second option as being that it accounts for the change in the costs of all transmitters, including those building new transmission lines in coming years, not just Hydro One.

Hydro One submitted that annually adjusting the ETS rate would likely result in regulatory complexity for the IESO, that collects the ETS rate, and for exporters that make decisions based on the ETS rate.

Findings

In section 3.3.2 above, the OEB determined that the ETS rate will be set at $1.78/MWh, effective January 1, 2023, for a period of two years. The OEB acknowledges that the final costs for Hydro One's transmission operations are subject to update through Hydro One's 2023-2027 Joint Distribution and Transmission Rates Application proceeding.[46] However, this would still be based on a forecast. To provide certainty for the next two years, the OEB is setting the rate on a final basis.

The OEB is setting the ETS rate on a two-year basis to allow for a period of stability, given forward contracts that may already be in place in the electricity market. Effective January 1, 2025, the ETS rate will escalate annually based on the RCI for Hydro One's transmission business. The ETS rate will now be based on Hydro One's forecast transmission costs. Forecast transmission costs are the basis for Hydro One's revenue requirement, which will be escalated by the RCI. It is therefore appropriate to escalate the ETS by the same RCI mechanism to reflect increasing costs.

Some parties argued that an ETS rate that changes annually will increase regulatory complexity. It is not clear to the OEB how an ETS rate that changes annually is any more complex than annual changes to the UTRs that the IESO manages. The OEB

[46] EB-2021-0110.

concludes that any added complexity is justified by an ETS rate that will reflect increasing costs. The OEB reiterates that the ETS rate will be kept at the approved level for two years to provide a period of transition.

The OEB will review the ETS rate again at the time of Hydro One's next rebasing application for its transmission operations, expected for 2028 rates. The OEB considered an earlier review of the ETS rate. However, the magnitude of the ETS revenue with a current forecast of $37.4 million, in comparison to the overall transmission revenue requirement, which was close to $2 billion for 2022, led the OEB to conclude that the cost of an earlier review was not warranted. However, the OEB requires the IESO to notify the OEB of any material change to electricity market conditions or forecasts that could make an earlier review appropriate, for future consideration.

Hydro One shall prepare an updated cost allocation study based on Hydro One's transmission costs at the time of its next rebasing application for its transmission operations. The OEB will determine at that time whether the matter of the ETS rate will be heard through a generic hearing or as part of Hydro One's application.

3.4 Other Matters

3.4.1 Applicability to Other Transmitters

LPMA and OEB staff each submitted that they agree with evidence submitted by Hydro One that ETS revenue should continue to accrue solely to Hydro One.

LPMA submitted that it does not support Elenchus' recommendation to adjust the ETS rate to include other transmitters' approved network revenue requirements, because only Hydro One owns interties.

In its responding submission, Hydro One made clear that there are two distinct issues:

1. whether the network assets of all transmitters should be used in the calculation of the ETS rate
2. whether ETS revenue should be paid to other transmitters

Hydro One confirmed its support for continuing the existing process in which ETS revenue is paid solely to Hydro One as the sole owner and operator of Ontario's interties. Hydro One also submitted that this approach is simpler to administer and achieves the same outcome for customers.

Hydro One also confirmed its support for Elenchus' recommendation that the ETS rate be calculated based on the network assets of all Ontario transmitters because they own network assets that are used by exporters. Hydro One also submitted that Elenchus' recommendation is consistent with the OEB's finding in its 2020 decision that the use of shared network facilities by exporters should be considered in setting the ETS rates.

Findings

The ETS rate will only apply to Hydro One. The OEB agrees with Hydro One's submission that it would require additional administration for the ETS to apply to all transmitters, and there would be no net difference to the outcome. This is because the revenue from the ETS is an offset (decrease) to both the network revenue requirement of each transmitter and the total used to set the UTRs.

The OEB also finds that the calculation of the ETS rate will include the network assets of all Ontario transmitters. The OEB agrees that this is appropriate because exporters make use of the network assets and are being allocated a portion of these costs and offsetting external revenues.

3.4.2 Market Data

SEC, VECC and OEB staff submitted that additional analysis should be undertaken to inform future reviews of the ETS rate on how changing the ETS rate impacts export volumes, congestion rents, and electricity market performance. VECC argued that this information would assist the OEB in understanding how future ETS rate decisions may affect system operations and efficiency.

SEC and VECC both suggested that the OEB create a working group of interested parties to determine the scope, data requirements, and methodology for a study. In its responding submission, the IESO stated that it would participate in an ETS working group if this proposal were accepted by the OEB.

OEB staff recommended that a monitoring and analysis program should be led by an independent party, such as the IESO, working either on its own or in collaboration with other parties. The purpose of this program would be to help understand how changing the ETS rate affected operability, electricity markets and any other relevant considerations.

The IESO cautioned against mandating further studies or ongoing monitoring by the IESO. The IESO stated that:

> In the IESO's view, the relevant considerations in setting the ETS rate have been well defined, albeit in a largely qualitative manner, in this proceeding. The IESO is skeptical that the results of any further study will provide greater clarity to parties than what is available at this time. Any further study of the ETS rate will, by necessity, be premised upon assumptions and forecasts that would likely be the subject of the same types of disputes that have arisen in this proceeding.[47]

The IESO also stated that it does not do economic forecasting, and that actual market conditions will result from a multitude of factors. The IESO indicated that it would likely need to retain a consultant to conduct further study.

Pollution Probe submitted that the IESO should complete a study on the benefits, costs, and risks of the ETS rate to key stakeholders to inform a future ETS rate proceeding. Pollution Probe submitted that the study should include the following:

- Net economic benefits to Ontario ratepayers, including operation cost savings
- Technical and operational risks to Ontario's baseload generation fleet
- Impact on the capabilities of Ontario's power generation infrastructure
- Health and outlook of Ontario's wholesale energy trading markets
- Hydro One intertie assets[48]

APPrO submitted that OEB should not prescribe disclosure of any market information, as the IESO is best equipped to conduct a process to consider all of the relevant factors, competing views, potential risks, and scope of such disclosure.

Findings

The OEB invited parties to make submissions regarding IESO market data disclosure and future market studies by Hydro One or the IESO to assist in determining the ETS rate methodology in a future proceeding.[49] Submissions did not identify additional market data that the IESO should make available. However, several parties identified a need for additional quantitative analysis that should be conducted either through an IESO led working group or a monitoring program. The OEB notes the IESO's disagreement with participants. Notwithstanding, the OEB sees merit in participants' recommendation that a future review of the ETS rate would benefit from quantitative

[47] IESO Submission, September 6, 2022, p.17.

[48] Pollution Probe Submission, September 6, 2022, p.10.
[49] Presentation Day, Transcript, p.144.

analysis and agrees with APPrO that the IESO is best equipped to do so. The OEB directs the IESO to generate a report that aligns with the timing of Hydro One's next cost allocation update. This report should include, without limitation, relevant market data and analysis together with a recommendation on the ETS rate that incorporates consideration of the implications of the Market Renewal Program, the domestic supply/demand outlook and impact on interties exports.

The OEB would have benefited from a formal independent econometric study that yielded export/import price elasticities in setting the ETS rate. Given the previously noted policy issues, however, the OEB expects that such a study will be equally informative in the future once the IESO's Market Renewal Program has been implemented and when Ontario's supply-demand mix is less uncertain.

3.4.3 Disposition of Transmission Rights Clearing Account (TRCA)

Currently ETS revenue is an offset to Hydro One's transmission revenue requirement resulting in lower rates to domestic customers. The IESO market also has a TRCA that is disposed from time to time to wholesale market participants based on set criteria. When TRCA amounts are disposed to electricity distributors, the amounts flow through the wholesale market service charge variance account (Account 1580) to consumers. Transmission costs flow through the transmission variance accounts (Accounts 1584 and 1586). This results in differences in how the ETS revenues and amounts from the TRCA flow to different end use customers. This approach may be appropriate. But given this difference, the OEB will undertake a review to determine if the existing mechanism used by electricity distributors to account for TRCA amounts included on their IESO invoices remains appropriate.

3.4.4 Should Other Approaches or Settlements be used for setting the ETS?

LPMA submitted that if the OEB adopted a cost-based methodology for setting the ETS rate, then a settlement-based approach should not be permitted. LPMA submitted that if a settlement-based approach were used to set the ETS rate, other rates would be impacted due to the "zero sum" nature of cost allocation and other affected customers may not be represented in the proceeding or settlement process. If the OEB were to adopt some other methodology, then LPMA submitted that a settlement-based approach could be permitted. However, everyone impacted should be at the settlement table.

SEC submitted that settlement would be an appropriate process for setting the ETS rate because of the need to balance two fundamentally different approaches to rate-setting.

The IESO submitted that it would not preclude the continued use of a settlement-based approach to set the ETS rate. The IESO also submitted that it does not believe there is a mechanistic formula which can be used to set the ETS rate, because of the dynamic nature of the electricity market and the anticipated future changes to the Ontario grid.

APPrO submitted that a settlement-based approach should not be used to set the ETS rate, restating that certainty in the ETS rate is of paramount importance to exporters and a settlement-based approach introduces significant uncertainty to setting the ETS rate. APPrO also submitted that if a settlement-based approach is desired, the ICP already accomplishes this, and a settlement based ETS rate is not necessary.

LPMA submitted that, going forward, the OEB should direct Hydro One to investigate the use of the network charge as a component of the ETS rate. Instead of allocating shared network costs and shared network OM&A expenses to domestic and export pools, these costs would be allocated to the network pool. One network charge would then be determined based on the aggregate of the domestic and export demands and this network charge would be one component of the ETS rate. The remainder of the ETS rate would continue to be based on dedicated interconnect capital costs and dedicated interconnect OM&A expenses, which would be allocated to domestic customers (based on import use) and to export customers.

Hydro One submitted that LPMA's proposal should be rejected because there is broad support for Elenchus' cost allocation methodology, and therefore it is not necessary to investigate alternative methodologies.

Findings

The OEB finds the issues of other approaches to be moot given that a cost-based approach will be used to set the ETS rate until 2028. The OEB expects that future panels can determine whether the ETS rate should continue to be set using a cost-based approach, whether further studies are warranted beyond those directed in this Decision, whether a settlement-based approach is appropriate, or whether other approaches should be adopted.

4 IMPLEMENTATION

The OEB is setting the ETS rate at $1.78/MWh effective January 1, 2023, for a period of two years. Therefore, no further steps are required at this time. This rate will supersede the ETS rate on the 2022 Ontario Uniform Transmission Rate Schedules, which will be updated in due course following the completion of the EB-2021-0110 proceeding.

The RCI determined in the EB-2021-0110 proceeding will apply to the ETS rate effective January 1, 2025, and each year thereafter until the effective date of Hydro One's next rebasing for its transmission business.

The OEB notes that the Hydro One ETS revenue forecast as part of the EB-2021-0110 proceeding is $37.4 million for 2023 and $37.1 million for 2024 based on an ETS rate of $1.85/MWh. The new rate of $1.78/MWh that will be effective in 2023 and 2024, and adjusted thereafter, will result in differences between this forecast revenue and the actual revenue. This difference will be recorded in the Excess Export Service Revenue Variance Account (Account 2405) for future disposition. The OEB considers it appropriate for Hydro One to dispose of the balance in this variance account on an annual basis commencing when the balance for 2023 is final until the effective date of the next transmission rebasing.

5 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

1. The ETS rate shall be set at $1.78/MWh, effective January 1, 2023.

2. Effective January 1, 2025, the ETS rate shall be adjusted annually using the RCI determined in the EB-2021-0110 proceeding.

3. The Excess Export Service Revenue Variance Account (Account 2405) balance shall be disposed of on an annual basis, commencing when the balance for 2023 is final.

4. Hydro One shall prepare an updated cost allocation study based on Hydro One's transmission costs at the time of its next rebasing application for its transmission operations.

5. The IESO shall generate a report that aligns with the timing of Hydro One's next cost allocation update that includes relevant market data and analysis together with a recommendation on the ETS rate that incorporates consideration of the implications of the Market Renewal Program, the domestic supply/demand outlook and impact on interties exports.

6. Intervenors shall submit their cost claims no later than December 8, 2022.

Parties are responsible for ensuring that any documents they file with the OEB, such as applicant and intervenor evidence, interrogatories and responses to interrogatories or any other type of document, **do not include personal information** (as that phrase is defined in the *Freedom of Information and Protection of Privacy Act*), unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Please quote file number, **EB-2021-0243** for all materials filed and submit them in searchable/unrestricted PDF format with a digital signature through the OEB's online filing portal.

- Filings should clearly state the sender's name, postal address, telephone number and e-mail address.

- Please use the document naming conventions and document submission standards outlined in the Regulatory Electronic Submission System (RESS) Document Guidelines found at the File documents online page on the OEB's website.

- Parties are encouraged to use RESS. Those who have not yet set up an account, or require assistance using the online filing portal can contact registrar@oeb.ca for assistance.
- Cost claims are filed through the OEB's online filing portal. Please visit the File documents online page of the OEB's website for more information. All participants shall download a copy of their submitted cost claim and serve it on all required parties as per the Practice Direction on Cost Awards.

All communications should be directed to the attention of the Registrar at the address below and be received by end of business, 4:45 p.m., on the required date.

With respect to distribution lists for all electronic correspondence and materials related to this proceeding, parties must include the Case Manager, Michael Price at Michael.Price@oeb.ca and OEB staff counsel, James Sidlofsky James.Sidlofsky@oeb.ca.

Email: registrar@oeb.ca

Tel: 1-877-632-2727 (Toll free)

DATED at Toronto November 24, 2022

ONTARIO ENERGY BOARD

Nancy Marconi

Digitally signed by Nancy Marconi
Date: 2022.11.24 09:43:52 -05'00'

Nancy Marconi
Registrar