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March 28, 2022 **VIA E-MAIL**

Ms. Nancy Marconi
Registrar
Ontario Energy Board
Toronto, ON

Dear Ms. Marconi:

Re: Generic UTR Issues Proceeding
Export Transmission Service Rate
VECC Interrogatories
Ontario Energy Board File Number: EB-2021-0243

Please find attached the interrogatories of VECC in the above-noted proceeding. This document has been sent to Hydro One and the IESO and to all other registered parties to this proceeding.

Yours truly,

W Harper

William Harper
Consultant for VECC/PIAC

Email copy:
All parties to EB-2021-0243

REQUESTOR NAME	**VECC**
INFORMATION REQUEST ROUND:	**# 1**
TO:	**Hydro One Networks (HONI) and Independent Electricity System Operator (IESO)**
DATE:	**March 28, 2022**
CASE NO:	**EB-2021-0243**
APPLICATION NAME	**Generic Uniform Transmission Rates – Export Transmission Service Rate**

ISSUE 1: IS IT APPROPRIATE TO CONTINUE TO RELY ON AN EXPORT TRANSMISSION SERVICE (ETS) RATE AND ON INTERTIE CONGESTION PRICING (ICP) TO CHARGE FOR EXPORT SERVICE?

1-VECC-1

Reference: Joint HONI/IESO ETS Rate Submissions[1], pages 3 and 12
EB-2021-0110, Exhibit I/Tab 2/Schedule 1, page 4

Preamble: The Joint Submissions (page 3) state: "Among other things, the contention emerged from what stakeholders believed should be the basis of, or purpose of, the tariff design".

The Joint Submissions (page 12) state:
Hydro One does not make any recommendations on a specific ETS Rate. While Hydro One desires the outcome that is best for its customers, it is not in a position to determine what ETS Rate, if any, would ultimately result in the best overall outcome for its customers. As such, having regard to the purposes of the IESO under the Electricity Act and of the OEB under the Ontario Energy Board Act, Hydro One defers to the IESO's expertise and responsibility to advise on the potential impacts of changes to the ETS Rate and the recommended ETS Rate from a market operations perspective, and to the OEB's expertise and responsibility with respect to the balancing of the various competing interests in setting the ETS Rate".

HONI's EB-2021-0110 Application sets out the ratemaking principles used in the development of its proposed distribution rates.

[1] Hereafter referred to as the "Joint Submissions"

1.1 What does HONI consider to be the purpose of the ETS rate?

1.2 In HONI's view, are the ratemaking principles used by HONI in the setting of distribution rates also applicable to the ETS Rate?

1.2.1 If not, why not?

1.3 In HONI's view does its ratemaking principles, as set out in EB-2021-0110, align with the OEB's objectives as set out in the OEB Act (Section 1(1))?

1.4 In HONI's view, apart from its objectives as set out in the OEB Act (Section 1(1)), are there any other considerations that the OEB should take into account when setting the ETS rate?

1-VECC-2

Reference: Joint Submissions, pages 3 and 13
EB-2012-0031, IESO Submission (March 8, 2013), page 4
EB-2021-0110, Exhibit I/Tab 2/Schedule 1, page 4

Preamble: The Joint Submissions (page 3) state: "Among other things, the contention emerged from what stakeholders believed should be the basis of, or purpose of, the tariff design".

The Joint Submissions (page 13) state:
"For these reasons, the IESO maintains the view that reducing the ETS rate to zero would best encourage the efficient use of electricity and promote economic efficiency in the Ontario market. However, the market has operated with the ETS rate near its current level since market open and the IESO is mindful there are other relevant considerations the OEB must make when setting an ETS rate. Therefore, the IESO recommends the rate be set at zero or no higher than the current $1.85/MWh to maximize efficient use of electricity and promote economic efficiency in the Ontario market".

The IESO's EB-2012-0031 Submission states:
"The IESO appreciates that in establishing an ETS tariff for Ontario, the Board must have regard to general ratemaking principles and its statutory objects — protecting the interests of consumers, promoting economic efficiency and cost effectiveness, and facilitating a financially viable electricity industry — and that the Board's consideration of these factors invariably entails a balancing of interests."

2.1 What does the IESO consider to be the purpose of the ETS rate?

2.2 In the IESO view, are the considerations the IESO must take into account in setting the ETS rate those as outlined in its EB-2012-0031 Submission (referenced above)?

2.3 The IESO's EB-2013-0031 Submission makes reference to "general rate making principles". Are these the same principles as HONI has set out in its current EB-2021-0110 Application (as referenced above)?

2.3.1 If not, what are they?

1-VECC-3

Reference: Joint Submissions, page 10

Preamble: The Joint Submissions (page 10) state: "When setting the ETS, consideration should be given to maximizing the operational and economic benefits provided by exports by minimizing transaction costs".

3.1 What does the IESO consider to be "transaction costs" and does it include Uplift fees and Intertie Congestion charges?

3.2 From what/whose perspective should operational and economic benefits be "maximized"?

1-VECC-4

Reference: Joint Submissions, Attachment 2

4.1 Please provide a schedule that sets out, for each of the jurisdictions addressed in Attachment 2 and the IESO: i) whether or not the exports are subject to congestion payments, ii) when congestion payments for exports are required, iii) how congestion payments are determined, iv) who are the beneficiaries of the congestion payments and v) whether congestion payment revenues are considered/factored into the determination of the tariffs for export transmission service.

1-VECC-5

Reference: Joint Submissions, Attachment 2

5.1 Please provide a schedule that sets out, for each of the jurisdictions addressed in Attachment 2 and the IESO: i) whether or not there is a transmission rights market, ii) how transmission rights are purchased, iii) what the benefits are for holding/owning transmission rights and iv) whether revenues or financial commitments created through the transmission rights market are considered/factored into the determination of the tariffs for export transmission service.

1-VECC-6

Reference: Joint Submissions, Attachment 1, page 20

Preamble: Attachment 1 states:
"The majority of jurisdictions surveyed by Elenchus, including all Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) in the United States and most ISOs and transmitters in Canada set Open Access Transmission Tariffs (OATTs) in accordance with FERC Orders No. 888, 889, 890, and 2000. All Canadian provinces operate within the OATT framework except Ontario and Alberta.
These jurisdictions have postage stamp "Network Service charges" that are analogous to Ontario's domestic transmission tariff. Exports are analogous to "Point-to-Point" transmission service, which are applied to the transmission of energy along specific paths, from a point of receipt to a point of delivery. Unlike Ontario's Domestic and Export rates, which are set based on an allocation basis, Point-to-Point charges are calculated based on the Network Service charge".

6.1 Does Charles River Associates agree with the comments made by Elenchus regarding ETS rates in other jurisdictions?
  6.1.1 If not, with which points does Charles River Associates disagree and why?

1-VECC-7

Reference: Joint Submissions, page 12 and Attachment 1, Table 1

Preamble: The Joint Submissions state (page 12):
"From an economic standpoint, exports of energy from Ontario have contributed approximately $330-520 million annually to Ontario in market revenues".

7.1. Please confirm that the referenced statement is based on Attachment 1, Table 1.

  7.1.1 If not confirmed, what is the basis for the statement?

  7.1.2 If confirmed, do all of the values included in Table 1 represent "revenues"?

1-VECC-8

Reference: Joint Submissions, page 13 and Attachment 3, page 14 of 17
EB-2012-0031, Exhibit I, Tab 23, Schedule 5.14 VECC 54

Preamble: The Joint Submissions state (page 13):
"Even a relatively small increase in the ETS rate beyond the historical range of $1-2/MWh could have a material impact on heavily traded interties where price margins are already small. For example, prior analysis has shown that increasing the ETS rate from $0 to $5.80/MWh would cause a 50% reduction in export volumes".

The Joint Submissions state (Attachment 1, page 14):
"At this time, the IESO has not undertaken a quantitative analysis to estimate the impact of a higher ETS rate on exports; however, even a relatively small increase in the ETS rate beyond the historical range of $1-2/MWh could have a material impact on heavily traded interties where price margins are already small. The 2012 CRA analysis demonstrates that in one case increasing the ETS rate from $0 to $5.80/MWh would cause a 50% reduction in export volumes (expressed as a percentage of status quo volumes)".

The response to VECC 54 from EB-2012-0031 provided the following information based on the various ETS tariffs considered in the 2012 CRA analysis:

a)
MWh

Scenario		2013	2015	2017
Status Quo ***Nuclear Curtailment***	**Total Exports**	20,977,195	22,234,111	6,833,429
	Exports sourced from Imports	1,928,395	2,584,043	2,399,606
	Exports less Wheel-Throughs	19,048,800	19,650,068	4,433,823

b)
Exports less Wheel-Throughs (MWh)

Scenario	2013	2015	2017
Status Quo ***Nuclear Curtailment***	19,048,800	19,650,068	4,433,823
Unilateral Elimination ***Nuclear Curtailment***	24,692,695	19,729,741	4,623,132
Equivalent Average Network Charge ***Nuclear Curtailment***	14,179,802	19,639,264	3,868,360
Two-Tiered Scenario A ***Nuclear Curtailment***	18,772,678	19,764,320	4,553,078
Two-Tiered Scenario B ***Nuclear Curtailment***	20,331,572	19,701,651	4,561,635

8.1. In the current Joint Submissions (Attachment 3, footnote 31) the IESO states that the basis for the 50% is "IESO internal analysis based on data presented in Export Transmission Service (ETS) Tariff Study, Charles River Associates, May 16, 2012, Pg. 18-20". It is noted that for 2013 the CRA results reported in VECC 54 showed a 43% reduction in exports when comparing the Equivalent Average Network Charge case versus the Unilateral Elimination case. Is this the basis for the IESO's referenced 50% reduction?

8.1.1 If not, please provide the internal analysis that derived the 50% value.

8.1.2 If not, please reconcile the results of the IESO's internal analysis with the results reported in VECC 54.

8.2 In the response to VECC 54 the reduction in export volumes (as between the Unilateral Elimination case and the Equivalent Average Network Charge case varies widely for the three years studied (i.e. from a 43% reduction in 2013 to a less than 0.5% reduction in 2015 and a 16% reduction in 2017. What are the main reasons for the wide range in export reductions across the three years?

8.2.1 If the reasons are related to differences in market and system conditions (e.g. generation mix, degree of surplus baseload generation, anticipated prices in external markets relative to Ontario, etc.) which of the three years <u>best</u> reflects the system conditions expected to exist in the 2023-2027 period and why?

8.2.2 If the reasons are related to differences in market and system conditions (e.g. generation mix, degree of surplus baseload generation, anticipated prices in external markets relative to Ontario, etc.) which of the three years <u>least</u> reflects the system conditions expected to exist in the 2023-2027 period and why?

1-VECC-9

Reference: Joint Submissions, Attachment 3, page 7 of 17
IESO's 2021 Annual Planning Outlook, pages 51 and 52

Preamble: Attachment 3 states: (page 7):
"Historically, Ontario has been a net exporter of electricity, primarily to the U.S. jurisdictions, and a net importer from Quebec".

9.1 With respect to the graph in Attachment 3 (page 7 of 17), please provide a revised version that also shows: i) the actual values for 2021 and ii) the forecast values for 2022-2027 based on IESO's 2021 Annual Planning Outlook.

9.2 Do the forecast exports shown on page 52 of the IESO's 2021 APO include: i) exports associated with surplus baseload generation and ii) recognition of future intertie congestion?

9.2.1 If the forecast exports recognize intertie congestion, what was the impact of intertie congestion on the export forecast?

1-VECC-10

Reference: Joint Submissions, Attachment 3, page 7 of 17

Preamble: Attachment 3 states: (page 7):
"However, the needs and activities of competitive exporters (e.g., volume and direction of transactions) are not considered when planning the transmission system, and so are not a primary driver of investment". (emphasis added)
"When designing the system, the focus is on ensuring that domestic load can be supplied for a wide a range of system conditions. For many of these conditions planning standards do not require the system to support exports simultaneously". (emphasis added)

10.1 The references quoted indicate that: i) exports are not a primary driver for investment in transmission and ii) planning standards do not require the system to support exports simultaneous under many planning conditions. However, at the same the wordings suggest that, under certain conditions, exports are a driver (if not a primary driver) and do impact transmission investment planning decisions. Please clarify if this is the case and whether there are circumstances under which exports impact transmission planning by the IESO.

1-VECC-11

Reference: Joint Submissions, Attachment 3, pages 7-8 of 17

Preamble: Attachment 3 states: (pages 7-8):
"It is also important to note that while the IESO provides market participants and consumers with the same access to grid service, the way the system is designed and the priority given to exporters results in exports being subject to more frequent service interruption compared to domestic load. Exporters can be curtailed for more reasons than Ontario consumers, including internal adequacy or reliability issues in neighbouring jurisdictions. As a result, the IESO curtails exports for reliability reasons more often than domestic load".

Joint Submissions, Attachment 3, Footnote 10 states:
"Based on internal analysis, the IESO has curtailed export annually between 18-35% of all hours since 2016".

11.1 Please list (by priority) the control actions the IESO takes to maintain system reliability, specifically highlighting the relative priority given to: i) dispatchable domestic load, ii) domestic load under DR contracts/agreements, iii) exports and iii) non-dispatchable domestic load.

11.2 When determining the hours in each year that exports were curtailed, does the IESO include all hour where exports have been curtailed on at least one intertie?

11.2.1 Does this mean that in hours where exports are considered to be "curtailed" there may be interties where exports are not actually curtailed?

11.3 Please provide a schedule that sets out for each of the years since 2016 the number of hours that exports were curtailed consistent with the 18-35% noted in Footnote #10.

11.4 Please provide schedules that for each of the years since 2016 set out for each intertie the number of hours that exports were curtailed.

11.4.1 On the same schedules please indicate the number of hours in each year that the curtailment was due to: i) reliability issues in neighbouring jurisdictions, ii) congestion on the intertie owned by Hydro One, iii) internal congestion in Ontario and iv) Other Reasons (please specify and separate if material).

11.5 Do exporters received any compensation when their exports are curtailed?

11.5.1 If yes, under what circumstances? In responding please indicate how these circumstances relate to the reasons for curtailment documented in the previous question.

11.5.2 If yes, what were the annual amounts paid to exporters since 2016 and who paid them (e.g., were the amounts paid by domestic consumers)?

11.5.3 If yes, are these payments reflected in Attachment 3, Table 1?

1-VECC-12

Reference: Joint Submissions, Attachment 3, pages 8-9 & 12-13 of 17

Preamble: Attachment 3 states: (pages 9):
"Intertie trading provides a range of operational benefits including system flexibility to balance supply and demand, and ancillary services to support grid stability. Interties also play a key role supporting system operations during unplanned or emergency events. From a broader perspective, interties support regional grid

reliability and enable Ontario to assist other jurisdictions during contingency events".

Attachment 3 states (page 12):
"Fewer exports will have a negative operational impact across a number of areas, foremost in reducing the flexibility that interties provide to efficiently balance the grid in the course of normal system operations, surplus baseload management and unexpected events. Furthermore, less exports will reduce the role that interties can play in supporting regional reliability and diversification."

Joint Submissions, Attachment 3, pages 13 of 17 states:
"In addition to decreasing ICP revenue, a higher ETS could have the effect of reducing energy exports from Ontario and by extension the operational and economic benefits that those lost exports provide."

12.1 Pages 8-9 of Attachment 3 list a number of benefits interties and intertie trading provide. The Attachment (page 10 of 17) subsequently describes how higher ETS tariffs may affect the level of exports during periods of surplus baseload generation and the resulting need to curtail domestic sources of generation. For each of the other operational benefits ascribed to interties (i.e., Ancillary Services, Regional Reliability, Geographic Distribution and Emergency Events – per pages 8-9), please describe how the benefits are impacted by the level of exports (per pages 12 & 13).

1-VECC-13

Reference: Joint Submissions, Attachment 3, pages 9-11 of 17

Preamble: Attachment 3 states (pages 9):
"When demand for intertie access is greater than the physical capability, the intertie is considered "congested" and traders are charged "congestion rent" in the form of the ICP – a premium for access based on willingness-to-pay."

Attachment 3 states (page 10):
"The ICP is set hourly based on competitive trader bids indicating how much they would be willing to pay to export over the intertie for a specific hour."

Attachment 3 states (page 11):
"For example, the ICP on the intertie to Michigan (where there has historically been high demand to export) averaged $19/MWh in 2017 while annual prices on the Minnesota and New York interties are in the range of $7-9/MWh."

13.1 Please outline precisely when and how the ICP for a particular hour is determined.

13.2 In those hours when congestion rent (ICP) is applicable to exports, how is the final hourly charge to the exporter for market energy (including ICP) determined?

13.3 Is congestion rent (in the form of ICP) only charged for congestion on the interties or is it also applicable in the other circumstances such as when domestic/internal congestion would limit exports?

13.4 Please provide a schedule that for each of the years since 2016 sets out the number of hours in which congestion rent (ICP) for exports was applicable at one or more of the interties.

13.5 Are those hours when the ICP applies for exports considered to be hours when exports are curtailed per the discussion in Attachment 3, Footnote 10?

13.5.1 If not, why not?

13.5.2 If not, since 2016 for how many of the hours in each year for which ICP was applicable at one or more of the interties was that hour considered to be a hour in which exports were curtailed?

13.6 Please provide schedules that for each of the years since 2016 set out for each intertie: i) the total number of hours exports were curtailed, ii) the number of hours exports were curtailed due to congestion on the intertie, iii) the number of hours congestion rent (ICP) was applicable for exports and iii) the number of hours where the circumstances described in points (ii) and (iii) occurred simultaneously.

13.7 Please provide schedules that for each of the years since 2016 set out for each intertie: i) the total volume of exports, ii) the volume of exports during those hours where exports over the intertie were curtailed for any reason, iii) the volume of exports actually curtailed during those hours where exports over the intertie were curtailed for any reason, iv) the volume of exports during those hours where exports were curtailed due to congestion on the intertie were curtailed, and v) the volume of exports actually curtailed when exports were curtailed due to congestion on the intertie.

13.8 Please provide schedules that for each of the years since 2016 set out for each intertie: i) the average ICP ($/MWh) for the year (based on the sum of the hourly ICP values divided by the number of hours) for exports, ii) the range of the hourly ICP values for exports for each year, iii) the number of hours the ICP value for exports was less than $1.85/MWh and iv) the number of hours the ICP value for exports was greater than $6.50/MWh.

1-VECC-14

Reference: Joint Submissions, Attachment 3, pages 9 & 11 of 17

14.1 Footnote 20 (page 11) indicates that the Congestion Rents Received from the Market in Table 2 are for both import and exports. Does the difference between: i) Congestion Rents Received from the Market in Table 2 and ii) Congestion Rents Collected from Exports in Table 1 represent the congestion rents received from imports?

14.1.1 If not, what does the difference represent?

14.1.2 If not, what were the congestion rents received from imports in each of the years?

14.2 Please describe when congestion rents for imports are applied and how the amount to be charged is determined (i.e., is the price the same as the ICP for exports and how is the volume that the price is to be applied to determined?).

1-VECC-15

Reference: Joint Submissions, Attachment 3, pages 7, 10 & 14 of 17

Preamble: Attachment 3 states: (page 7):
"In the case of an export from Ontario, the relevant transaction costs include the ETS, the ICP and Uplifts."

Attachment 3 states (page 10):
"Exporters also contribute approximately $40-50 million per year in uplift charges for system reliability provided through Ancillary Services and Operating Reserve. The export contribution reduces the cost that has to be recovered from domestic consumers for these services".

Attachment 3 states (page 14):
"Similar to congestion revenues, less exports would mean a reduced contribution from exports to system costs. Collectively exports contribute between $70 and 90 million per year in ETS and Uplift. Many of these system costs would remain, regardless of exports and so the cost would have to be recovered from domestic consumers".

15.1 Please outline how the Uplift Rate(s) is/are established (i.e., what are the costs and volumes used based on and when are the rates set?).

15.2 Do the costs associated with uplifts all vary directly with the amount of electricity sold through the IESO market?

15.2.1 If not, why not?

15.3 If market volumes (including exports) are higher/lower than assumed in the setting of the Uplift rate(s) such that Uplift revenues are higher/lower than required to cover costs, how is the variance between costs and revenues treated and how does this impact the current/future costs for exporters and domestic consumers?

1-VECC-16

Reference: Joint Submissions, Attachment 3, page 9 of 17

16.1 In Table 1 the congestion rents collected from exports are declining annually over the 2017-2020 period. Is it primarily due to a decrease in the ICP or a decrease in the volume of exports subject to congestion rent charges?

16.1.1 If it is due to a decrease in the volume of exports subject to congestion rent charges (I.e., ICP), please explain why the volumes are decreasing and whether the trend is expected to continue in the future.

16.1.2 If it is due to a decrease in the ICP, please explain why the ICP is decreasing and whether the trend is expected to continue in the future.

1-VECC-17

Reference: Joint Submissions, Attachment 3, pages 11-12 of 17

Preamble: Attachment 3, page 11 states:

"Revenues from the ICP are collected by the IESO in the Transmission Rights Clearing Account (TRCA). In addition to ICP revenue, the TRCA also contains revenue from Transmission Rights (TR) auctions. TRs are a financial contract that entitle their holder to a share of the ICP revenue on the intertie specified in the contract. TRs do not involve any use of the physical transmission system, and do not entitle the purchasers of the rights to utilize the transmission assets. By purchasing a TR, the TR holder gains insurance against changes in the ICP on the specified intertie (which can be unpredictable and volatile).
The IESO pays the TR holders from the ICP revenues. Revenues from the TR auction plus any residual ICP revenues after payments to TR holders are disbursed, subject to a TRCA balance threshold, on a semi-annual basis to domestic consumers and exporters to offset transmission costs".

17.1 Does the purchase of a TR on a specific intertie provide "insurance" against ICP charges for both imports and exports or are separate TRs (and TR auction payments) required for each?

17.1.1 If separate TRs are required for imports and exports, please provide a breakdown of the Total Allocated TR Auction Revenues for each year set out in Table 2 as between imports and exports.

17.2 With respect to Table 2, please provide a breakdown of the annual Payments to TR Rights Holders as between the payments to importers vs. exporters.

17.3 With respect to Table 2, please provide a breakdown of the annual TR Clearing Account Disbursement as between domestic customers and exporters.

1-VECC-18

Reference: Joint Submissions, Attachment 3, pages 11-12 of 17

Preamble: Attachment 3 (page 12) states:
"historically, disbursements from the TRCA were made based on volumetric consumption. The IESO adopted a recommendation from the OEB's Market Surveillance Panel to allocate TRCA surplus disbursements based on proportion of transmission service charges paid. The design change will ensure that a greater portion of TRCA disbursements are returned to domestic load, compared to other market participants such as exporters. Based on historical estimates, disbursements of TRCA surplus funds to domestic load will increase between 87-98%."

18.1 How is the TRCA disbursement to each individual domestic customer actually made?

18.2 Please show the allocation of the $118 M disbursed in 2020 as between domestic customers and exporters using: i) the pre-2021 methodology and ii) the new methodology implemented for 2021.

1-VECC-19

Reference: Joint Submissions, Attachment 3, pages 9-10 of 17

Preamble: Attachment 3 (page 10) states:
"Intertie trading helps Ontario avoid additional system costs that would otherwise have been incurred. From an economic efficiency standpoint, imports enable energy providers from outside the province to compete and displace more expensive domestic suppliers to meet Ontario's electricity needs at the lowest cost.

Equally, exporters reduce the operational system cost by taking surplus energy out of Ontario when demand is low. This brings in revenue to cover fixed costs and avoids curtailing wind resources, spilling water at hydroelectric stations and maneuvering of nuclear units. Without exports, Ontario consumers would have to pay for the cost of the foregone energy that is spilled or curtailed. Between 2017 and 2020, this would likely have added $150-240 million per year18 to Global Adjustment which would be recovered from domestic consumers."

19.1 Are the annual values for Avoided System Costs as set out in Table 1 based entirely on the cost of foregone energy that would have been spilled or curtailed without exports?

19.1.1 If not, what other "avoided costs" have been included for each year (i.e., the types and associated amounts)?

19.1.2 How were these other "avoided" costs calculated?

19.2 Using 2020 as an example, please provide the details regarding the calculation of the avoided system costs associated with the foregone energy that would have been spilled or curtailed without exports.

1-VECC-20

Reference: Joint Submissions, Attachment 3, pages 9-10 of 17

Preamble: Attachment 3 (page 9, Footnote 13) states that the calculation of Avoided System Costs was:
"Based on avoided nuclear and renewable resource curtailment, equal to 14TWh, 12TWh, 13TWh and 14TWh for 2017-20 respectively."

20.1 What were the total exports (TWh) in each of years over the 2017-2020 period?

20.2 Is it the IESO's contention that, in each of these years, roughly 12-14 TWh of exports was sourced from nuclear and renewable generation that would otherwise have been curtailed?

20.2.1 If yes, what is the basis for the IESO making this assumption and what steps have been taken to verify it?

20.3 For the period 2017-2020 were there any hours where foregone energy costs were actually incurred due to surplus baseload generation?

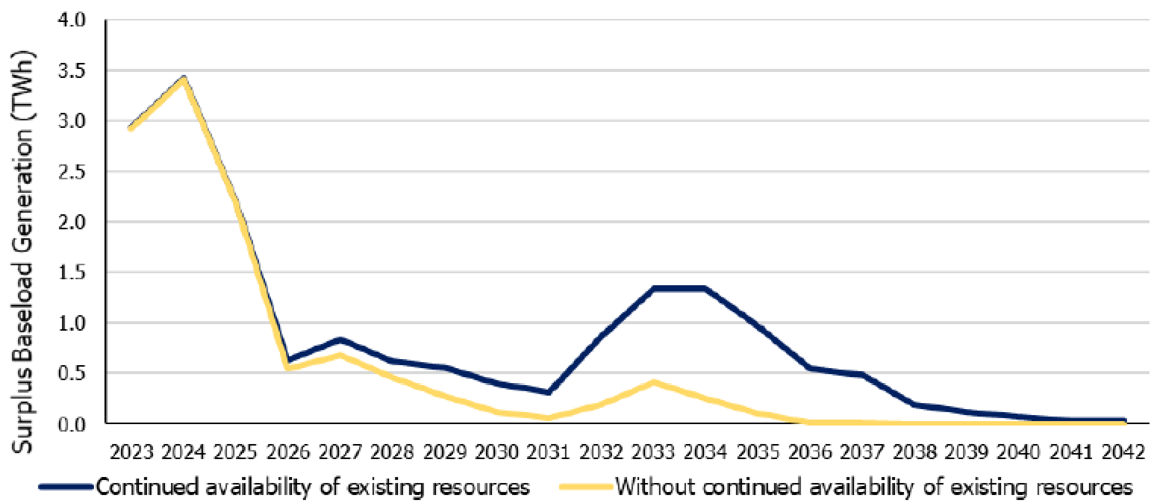
20.3.1 If yes, for how many hours in each year did this occur, what were the volumes (MWh) involved, what were the actual total costs incurred and are these “costs” included in Avoided System Costs set out in Table 1?

1-VECC-21

Reference: IESO’s 2021 Annual Planning Outlook, page 49 (Figure 23)

Preamble: Figure 23 from the IESO’s 2021 APO is set out below:

Figure 23 | Surplus Baseload Generation



21.1 Is the forecast of Surplus Baseload Generation as set out in Figure 23 before exports and actions taken by the IESO to maneuver/curtail baseload generation resources?

21.1.1 If not, what are the assumed reductions in baseload generation in each year due to: i) exports and ii) actions taken by the IESO to maneuver/curtail baseload generation resources?

21.2 With respect to Figure 23, please provide the equivalent values for 2017-2021 actuals and 2022 forecast.

1-VECC-22

Reference: Joint Submissions, Attachment 3, pages 12-14 of 17

Preamble: Attachment 3 (page 13) states:
“The IESO expects that <u>any</u> increase in revenue resulting from a higher ETS would be offset by an equivalent reduction in revenue from the ICP, which in turn will decrease the amount that is

disbursed from the TRCA to Ontario consumers." (emphasis added)

Attachment 3 (page 13) describes two scenarios. One where there is a large spread between the price to buy electricity in Ontario and the sell electricity in neighbouring jurisdictions such that an increase to the ETS will result in an offsetting decrease in ICP but no impact to export flows. The second is where there is a less price difference to buy electricity in Ontario and sell electricity in neighbouring jurisdictions such there will be less demand to export and there will be less or no ICP to offset an increase to the ETS.

22.1 Please provide a schedule that for each of the years 2017-2020 breaks down the total export volumes as between MWh where the ICP was applied and those where it was not.

22.2 If all export volumes are not subject to congestion pricing (i.e,, an ICP per the first scenario described on page 13) please explain how any increase in the ETS rate will be offset by an equivalent decrease in revenue from ICP.

22.2.1 Wouldn't this statement only apply in those situations where an ICP is in effect? If not, please explain why.

22.2.2 Furthermore, wouldn't the equivalent reduction only occur if the ICP was equal to (or greater) than the increased level of the ETS rate? If not, please explain why.

22.3 Please provide a schedule that for each of the years 2017-2020 sets out:

i. the number of hours where, without exports, there would have been surplus baseload generation,

ii. the number of hours that there was congestion and an ICP applicable at one or more of the interties,

iii. the number of hours where items (i) and (ii) were both occurring, and

iv. the number of hours where, without exports, there would have been surplus baseload generation and there was an ICP applicable at one or more interties but all of the ICP values were less than $1.85/MWh.

v. the number of hours where, without exports, there would have been surplus baseload generation and there was an ICP applicable at one or more interties but the ICP value was less than $1.85/MWh on one or more of the interties.

22.4 Please provide schedules that for each of the years since 2016 set out for each intertie:

i. the number of hours where, without exports, there would have been surplus baseload generation and congestion rent (ICP) was charged for the intertie.

ii. the number of hours where, without exports, there would have been surplus baseload generation and congestion rent (ICP) was not charged for the intertie.

iii. the average ICP value during those hours where, without exports, there would have been surplus baseload generation and congestion rent (ICP) was charged for the intertie.

iv. the range of ICP values during those hours where, without exports, there would have been surplus baseload generation and congestion rent (ICP) was charged for the intertie.

ISSUE 2: IF AN ETS RATE WERE TO CONTINUE TO EXIST ALONGSIDE ICP, WHAT APPROACH SHOULD BE USED TO SET THE ETS RATE?

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

2.1-VECC-23

Reference: Joint Submissions, Attachment 1, pages 1, 2, 4 and 19

Preamble: The Joint Submissions state (Attachment 1, page 1):
"In the past few years, exports have been affected by fewer and fewer service interruptions and in 2019 and 2020 curtailments were close to 20% of the hours. In the five peaks 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."

The Joint Submissions state (Attachment 1, page 2):
"Since exporters are able to use the transmission system much of the time, even at the times of the 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.
Even though export demand needs are not taken into account when HONI designs the transmission system and the IESO does not factor exports into its reliability planning assessments, the fact that exporters can use the transmission system much of the time supports the allocation of Shared Network Asset-related costs in a

cost allocation methodology to exports. Elenchus considered a range of potential cost-based methodologies".

The Joint Submissions state (Attachment 1, page 4):
"The May 2014 methodology was based on how the transmission system is designed and, since export needs are not considered in the planning of the transmission system, exports were not allocated a portion of Shared Network Asset-related costs.
The methodologies identified in this report reflect exports' use of the transmission system and how they are being treated by the IESO with not much service interruptions."

23.1 Please update Table 6 (page 19) so as to include the balance of 2020

23.2 Do the hours of export curtailment include hours where curtailment was the result of issues external to Ontario (e.g., transmission constraints outside of Ontario)?

23.2.1 If so, what proportion of the total hours curtailed in 2019 and 2020 are due to issues outside of Ontario?

23.3 The above references suggest that there are two approaches to allocating the asset-related costs. One where the allocation is based on considerations as to why and for whom the assets were designed and constructed and the second being based on considerations of how the assets are used and who benefits from their use. Please confirm that the methodology used in the May 2014 Elenchus Report utilized the first approach to cost causation for purposes of allocating Network Costs (excluding Intertie costs) whereas the current report utilizes the second approach.

23.3.1 If not confirmed, please explain why.

23.4 In view of the Elenchus authors of the Report, what are the pros/cons of each approach and is one of the two approaches preferable when determining the basis on which costs should be allocated in a cost allocation study?

2.1-VECC-24

Reference: Joint Submissions, page 9
Joint Submissions, Attachment 1, pages 2-3, 6-7 and 9-14

Preamble: The Joint Submissions state (Attachment 1-page 2):
"Elenchus considers the following three methodologies to be appropriate options to allocate Shared Network Asset-related costs to the export class. The three methodologies allocate Shared Network Asset-related costs on the basis of Shared Net Fixed

Assets, with adjustments to the Shared Net Fixed Assets allocator applied to each scenario. The Shared Net Fixed Assets allocator is underpinned by the 12 Coincident Peak ("12CP") allocator.
1) Fully allocate Shared Network Asset-related costs on the basis of Shared Net Fixed Assets.
2) Apply an adjusted Shared Net Fixed Assets allocator with export 12CPdiscounted by 50%, as a proxy for a hybrid model, half-way between no allocation and full allocation of Shared Network Asset-related costs to exports.
3) Apply an adjusted Shared Net Fixed Assets allocator with a that affected exports in the last few years. Assuming that exports were curtailed 20% of the hours in the last few years, adjust export volumes to 80%".

The Joint Submissions state (page 9):
"The 50% method is aligned with the OEB's decision on Pole Attachment Charges."

Attachment 1, page 3 sets out the resulting ETS rates for each of the three methodologies.

Attachment 1, pages 6-7 and 9-14 describe the Elenchus' May 2014 cost allocation methodology.

24.2 Please provide (as a working excel model) the cost allocation model based on Elenchus May 2014 Report (as filed in EB-2014-0140).

24.3 Please explain how the 50% hybrid method is "aligned with the OEB's decision on Pole Attachment Charges".

24.4 Please provide (as a working excel model) the cost allocation models based on each of these three methodologies outlined in the current Joint Submissions-Attachment 1 (page 2).

24.4.1 Based on each model's results, please provide the derivation of the ETS rate set out in Attachment 1-page 3.

2.1-VECC-25

Reference: Joint Submissions, Attachment 1, pages 7-8
EB-2019-0082, Ex. I, Tab 3, Sch. 1, Attachment 1 (APPRO IR #1)

Preamble: It is noted that HON filed an updated cost allocation model in the EB-2019-0082 proceeding.

25.1 Were there any changes in the methodologies used in Elenchus' cost allocation models prepared for EB-2014-0140 versus EB-2019-0082 with respect to: i) the functional categories used, ii) the assignment of costs to the functional categories, iii) the split of each functional category's costs between Domestic, Export and Shared and iv) the allocation of Shared Costs to Domestic versus Exports?

25.1.1 If yes, please provide a schedule setting out the differences.

25.1.2 If yes, please provide a copy (i.e., working excel model) of the cost allocation model prepared for EB-2019-0082.

2.1-VECC-26

Reference: Joint Submissions, Attachment 1, pages 11, 25-26 and 29-30

26.1 Please confirm that for the current Elenchus Report and resulting cost allocation models the only changes made to the cost allocation methodology as used in EB-2014-0140 (i.e., Elenchus' 214 Report) were: i) a change in the allocation of the costs directly related to Interties as described at pages 11 and 25-26, ii) a change in the allocation of Shared Network, Shared Network Dual Function Line, Shared Generation Line Connection and Shared Generation Transformation Connection costs as described on page 29, iii) a change in the allocation of External Revenues as describe on page 29 and iv) a change in the allocation of deferral and variance account balances as described on pages 29-30.

26.1.1 If there were any other changes in the methodology used in the current Elenchus Report versus that used in the 2014 Elenchus Report, please outline what they are.

2.1-VECC-27

Reference: Joint Submissions, Attachment 1, pages 11 and 25-26

27.1 Please identify those Network assets that are considered to be dedicated to interconnect for purposes of the current study.

27.1.1 Are these the same assets as were identified as being dedicated to interconnect in 2014 Report? If not, what has changed and why?

2.1-VECC-28

Reference: Joint Submissions, Attachment 1, pages 24 and 26-29
EB-2021-0110, Exhibit H, Tab 1, Schedules 2 and 3

28.1 Please confirm that in the current cost allocation study: i) the definition of the functions (i.e., Networks, Dual Function lines (Network and Line Connection portions), Generation Line Connection and Generation Transformation Connection, Common and Other) and ii) the assets and costs attributed to each of the functions are the same as those per HONI's EB-2021-0110 Application (H/1/2) for 2023.

28.1.1 If not, please explain what the differences are and why they exist.

28.2 It is noted that in HONI's EB-2021-0110 Application (H/1/3, page 3), that assets and costs associated with the Common and Other functions are pro-rated to the Network, Line and Connection rate pools. For purposes of Elenchus' ETS cost allocation study, were these costs pro-rated to the Networks (Intertie and Shared portions), Dual Function lines (Network-Shared and Line Connection portions), Generation Line Connection and Generation Transformation Connection functions?

28.2.1 If yes, how was this pro-ration done?

28.2.2 If not, how were they treated in Elenchus' ETS cost allocation study?

28.3 With respect to Attachment 1-page 28, please clarify the basis for the Net Fixed Asset allocator used to allocate the OM&A functionalized to Networks as between Interties and Networks-Shared?

28.3.1 If it is not based on the proportion of Net Fixed Asset values for Networks that are assigned to Interties vs. Networks-Shared), please explain why not.

28.3.2 f it is not based on the proportion of Net Fixed Asset values for Networks that are assigned to Interties vs. Networks-Shared), please provide an alternative ETS cost allocation model using this approach.

2.1-VECC-29

Reference: Joint Submissions, Attachment 1, page 29

29.1 With respect to Table 13, please explain why the 50% adjustment under the Hybrid Model results in a higher allocation to exports (8.74%) than the 20% adjustment in the Curtailment % Model (5.64%).

2.1-VECC-30

Reference: Joint Submissions, Attachment 1, page 29
EB-2021-0110, Exhibit H, Tab 5, Schedule 1, page 1

30.1 In HONI's EB-2021-0110 Application External Revenues are allocated to the Network, Line Connection and Transformation Connection rate pools. In Elenchus' ETS cost allocation study is it only the External Revenues (excluding Export Revenues) allocated to the Network rate pool in HONI's

EB-2021-0110 Applications that are allocated between Exports and Domestic?

30.1.1 If not, why not?

30.2 Please confirm that the Shared Net Fixed Assets allocator used to allocate External Revenues is based on 12CP values for Exports and Domestic.

30.2.1 Does this allocator yield the same results as would be obtained with the Net Fixed Assets assigned to Exports and Domestic were used as the basis for allocation?

30.2.2 Given the sources of the external revenues, please explain why this (i.e., 12 CP) is the appropriate allocator.

2.1-VECC-31

Reference: Joint Submissions, Attachment 1, pages 29-30
EB-2021-0110, Exhibit H, Tab 5, Schedule 1, page 1

31.1 In HONI's EB-2021-0110 Application the recovery of Regulatory Assets is allocated to the Network, Line Connection and Transformation Connection rate pools. In Elenchus' ETS cost allocation study is it only the Regulatory Asset recoveries (excluding Export Revenue variances) allocated to the Network rate pool in HONI's EB-2021-0110 Application that are allocated between Exports and Domestic?

31.1.1 If not, why not?

31.2 Given the nature of these Regulatory Asset accounts, please explain why it is appropriate to use revenue requirement as the allocator.

2.1-VECC-32

Reference: Joint Submissions, Attachment 1, page 20

Preamble: Attachment 1 states: "Point-to-Point service can be firm or non-firm. Firm service is offered only if the remaining transmission capacity is sufficient to provide that service".

32.1 In contrast to firm point-to-point service, when is non-firm point-to-point service offered/available?

2.1-VECC-33

Reference: Joint Submissions, Attachment 1, pages 22-24

Preamble: Attachment 1 states (page 23):

"The DTS functions are classified between capacity and energy. The classified functions are then each divided by the energy forecast to provide the DTS rate by its components. Export rates are calculated as a subset of the DTS rate components, some of which are pro-rated. The export rate is comprised of 100% of the energy-classified Bulk System and Regional System rates that are applicable to the DTS rate, 20% of the capacity-classified Bulk System and Regional System rates and 32% of the Operating Reserve rate. The export rate does not receive a share of Point of Delivery, Voltage Control, or Other System Support rate components.
The AESO provided the following rational for applying 20% to capacity-related Bulk and Network System costs: "The 20% contribution represents a minimal amount as Rate XOS includes no contract capacity or ratchet-based charges in hours in which XOS 1 Hour interchange transactions are not scheduled." The AUC has accepted this methodology in subsequent tariff applications."

33.1 Based on the above reference it appears that the export rate is derived from the same costs as the domestic rates, with some of cost allocations being subject to adjustment.

33.1.1 Please comment on whether or not Elenchus considers this to be a fair characterization and, if not, why not?

33.2 Elenchus has states (page 24) that it does not consider the manner that AESO sets export rates to be underpinned by a cost allocation methodology. Please explain, particularly when the ETS cost allocation methodologies proposed by Elenchus include adjustments for certain costs being allocated to Exports and it views all of its methodologies as being cost based (per page 32).

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

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

2.3-VECC-34

Reference: Joint Submissions, Attachment 2, pages 5, 6, 8 and Attachment 2, Appendix A, Tables 3-5

Preamble: The Joint Submissions (Attachment 2-page 5) state:
"Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference

between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions".

The Joint Submissions (Attachment 2-page 8) state:
"Notably, there is no difference between firm and non-firm transmission service as to rates; however, the ISO could curtail any external transactions to maintain system reliability."

34.1 With respect to the ISO-NE, footnote #1 in Table 1 (page 6) states that: "ISO-NE does not distinguish between Firm and Non-Firm transactions and does not offer monthly, weekly, or daily transmission services. It offers hourly transmission service, and this is noted in Table 1 of Section 3 of this report." However, at page 8 the Attachment states: "The ISO-NE tariff states rates on an annual $/kW-Yr basis, however service can be provided on hourly and monthly terms." Please reconcile and clarify if the ISO-NE offers monthly transmission service. If yes, please update the relevant tables in the Attachment accordingly.

34.2 How is the ISO-NE's annual export tariff determined and how does it relate to the transmission charges for domestic service (e.g. are they equivalent on a S/kW-Yr basis)?

34.3 With respect to Attachment 2-page 8 reference in the preamble, how do circumstances under which the ISO-NE curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

34.4 If there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does the ISO-NW determine which one will be scheduled?

34.5 Are ISO-NE export transactions subject to congestion payments?

34.5.1 If yes, under what conditions are such payments made and how are they established?

34.5.2 f yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

2.3-VECC-35

Reference: Joint Submissions, Attachment 2, pages 5, 6, 8-9 and Attachment 2, Appendix A, Tables 3-5

Preamble: The Joint Submissions (Attachment 2-page 5) state:
"Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions".

With respect to the NYISO, the Joint Submissions (Attachment 2-page 6-Table 1) state: "The energy-based rate for the Firm PTP service is different for each transmission company at the seam of NYISO, and it ranges between \$4.11 per MWh (Hydro-Québec) to \$7.75 per MWh (PJM)".

With respect to the NYISO, the Joint Submissions (Attachment 2, pages 8-9) state:
"As per the NYISO OATT Schedule H, the wholesale transmission service charge (TSC) recovers each Transmission Owner's embedded costs, as well as the transmission component of their control area costs, and is determined separately for each load zone. The TSC is adjusted to account for revenues from grandfathered agreements, financial transmission rights, and congestion payments. The net of all these quantities for each Transmission Owner is divided by the total annual billing quantities (MWh) to give a \$/MWh rate."

35.1 With respect to the Attachment 2-page 6-Table 1 reference in the preamble, for each of the transmission owners how does the transmission rate for export service relate to the transmission rate for domestic service?

35.2 In order to maintain system reliability, does the NYISO curtail export transactions prior to curtailing sales to domestic customers?

35.2.1 If yes, how do circumstances under which the NYISO curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

35.2.2 If there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does the NYISO determine which one will be scheduled?

35.3 With respect to the Attachment 2-pages 8-9 reference in the preamble, please explain the conditions under which export transactions are subject to congestion payments, how the amounts to be paid are determined and who benefits from the revenues received.

35.4 With respect to the Attachment 2-pages 8-9 reference in the preamble, please provide additional details regarding transmission rights, how the revenue are determined, what benefits parties receive from purchasing such “rights” and who benefits from the revenues received.

35.5 With respect to the Attachment 2-pages 8-9 reference in the preamble, does the wholesale transmission charge (TSC) represent the charge for domestic transmission service (i.e., to customers in the NYISO area)?

35.6 With respect to the Attachment 2-pages 8-9 reference in the preamble, are the revenues from financial transmission rights and congestion payments also factored into the determination of the charges for domestic transmission service or just factored into the determination of the charges for export transmission service?

2.3-VECC-36

Reference: Joint Submissions, Attachment 2, pages 5, 6, 9-10 and Attachment 2, Appendix A, Tables 3-5

Preamble: The Joint Submissions (Attachment 2-page 5) state:
“Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions”.

With respect to PJM, the Joint Submissions (Attachment 2, pages 9-10) state:
“This update also includes an annual update for zonal transmission system costs. The regulatory rationale behind this move appears to be to lower the Border rate so that it is more comparable to the Network Integration Service Rate charged to PJM customers for open access to the transmission system.”

36.1 With respect to the Attachment 2-page 6-Table 1, how are the daily on-peak and off-peak rates for PJM determined?

36.2 With respect to the Attachment 2-page 6-Table 1, how are the hourly on-peak and off-peak charges for PJM determined?

36.3 In order to maintain system reliability, does the PJM curtail export transactions prior to curtailing sales to domestic customers?

36.3.1 If yes, does this apply to both firm and non-firm service and if priority given to firm export transactions versus non-firm export transactions?

36.3.2 If yes, how do circumstances under which PJM curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

36.3.3 If there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does PJM determine which one will be scheduled?

36.4 Given that PJM's firm and non-firm rates are the same for Annual, Monthly, Weekly and Daily service (per Attachment 2-page 6-Table 1), what are the advantages and disadvantages of contracting for export service under firm as opposed to non-firm rates?

36.5 With respect to PJM's firm and non-firm export tariffs/service, which one most closely reflects the IESO's provision of export service in terms of scheduling and priority of service?

36.6 Are PJM's export transactions subject to congestion payments?

36.6.1 If yes, under what conditions are such payments made and how are they established?

36.6.2 If yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

36.7 With respect to the Attachment 2-pages 9-10 reference in the preamble, please confirm that intent underpinning the current design of PJM's export transmission tariffs is that they be comparable to transmission tariffs charge to domestic customers.

36.7.1 If not confirm, please explain the referenced quote.

2.3-VECC-37

Reference: Joint Submissions, Attachment 2, pages 5, 6, 10 and Attachment 2, Appendix A, Tables 3-5

Preamble: The Joint Submissions (Attachment 2-page 5) state:
"Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference

between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions".

37.1 With respect to SPP, is ATRR short for Annual Transmission Revenue Requirement?

37.1.1 Does this mean that firm annual export service is set on a comparable basis to the rates charged for domestic transmission service (e.g. Network Service)? If not, please explain how it is set in relation to the rates for domestic transmission service.

37.2 With respect to the Attachment 2-page 6-Table 1, how are the monthly, weekly, daily on-peak and off-peak rates for SPP determined?

37.3 With respect to the Attachment 2-page 6-Table 1, how are the hourly on-peak and off-peak non-firm charges for SPP determined?

37.4 In order to maintain system reliability, does the SPP curtail export transactions prior to curtailing sales to domestic customers?

37.4.1 If yes, does this apply to both firm and non-firm service and is priority given to firm export transactions versus non-firm export transactions?

37.4.2 If yes, how do circumstances under which the SPP curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

37.4.3 If there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does the SPP determine which one will be scheduled?

37.5 Given that SPP's firm and non-firm rates are the same for Annual, Monthly, Weekly and Daily service (per Attachment 2-page 6-Table 1), what are the advantages and disadvantages of contracting for export service under firm as opposed to non-firm rates?

37.6 With respect to SPP's firm and non-firm export tariffs/service, which one most closely reflects the IESO's provision of export service in terms of scheduling and priority of service?

37.7 Are SPP's export transactions subject to congestion payments?

37.7.1 If yes, under what conditions are such payments made and how are they established?

37.7.2 If yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

2.3-VECC-38

Reference: Joint Submissions, Attachment 2, pages 5, 6, 10 and Attachment 2, Appendix A, Tables 3-5

Preamble: The Joint Submissions (Attachment 2-page 5) state:
"Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions".

The Joint Submissions (Attachment 2, page 10) state:
"Firm annual billing units (MWh) are divided into total annual transmission revenue requirements for CAISO's high-voltage network system. Exports are charged the resulting high-voltage transmission access charge (HV-TAC) rate ($/MWh based) for each transaction."

38.1 With respect to CAISO, Attachment 2-Table 1 (page 6) only shows an hourly rate for the Off-Peak period. Does the same hourly rate also apply to the On-Peak period?

38.1.1 If not, what rate (if any) applies in the On-Peak period?

38.2 With respect to the Attachment 2-page 10 reference in the preamble, does this mean that, for CAISO, the transmission rate for export service is set on a comparable basis to the rates charged for domestic transmission service (e.g. Network Service)? If not, please explain how it is set in relation to the rates for domestic transmission service.

38.3 In order to maintain system reliability, does the CAISO curtail export transactions prior to curtailing sales to domestic customers?

38.3.1 If yes, how do circumstances under which the CAISO curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

38.3.2 If there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does the CAISO determine which one will be scheduled?

38.4 Are CAISO's export transactions subject to congestion payments?

38.4.1 If yes, under what conditions are such payments made and how are they established?

38.4.2 If yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

2.3-VECC-39

Reference: Joint Submissions, Attachment 2, pages 5, 6, 11-12 and Attachment 2, Appendix A, Tables 3-5 and Appendix C

Preamble: The Joint Submissions (Attachment 2-page 5) state:
"Finally, CRA observes that some tariffs offer firm and non-firm export services which are priced equally. The primary difference between firm and non-firm services is that export transactions using the latter are the first to be recalled or curtailed by the ISO at any time and at its discretion, for instance, when outages reduce transfer capability. The rules that specify the circumstances under which an ISO may recall non-firm service vary in each jurisdiction. Other jurisdictions do not specify a firm or non-firm basis of service for exports per the tariff service definitions".

The Joint Submissions (Attachment 2, page 11) state:
"AESO's export service is non-firm, fulfilled only when sufficient capacity exists on the transmission system to accommodate the capacity scheduled for export."

The Joint Submissions (Attachment 2, Appendix C, page 23 of 24) state:
"Each year, the cost allocation studies are updated to reflect the Tariff year's forecast revenue requirement, wires costs functionalization and classification, and forecast billing determinants. Rates XOS and XOM (specifically, levels of dollar-based and percentage of pool price amounts) are allocated according to their cost burden on the entire transmission system"

39.1 With respect to the reference in the preamble to Appendix C, does this mean that the AESO's transmission export service rate for network interties (Rate XOS) is set on a comparable basis to the rates charged for domestic transmission service (each is based on an allocated share of the transmission revenue requirement according to its cost burden on the entire transmission system)?

39.1.1 If yes, how is the cost burden for each (i.e., export vs. domestic service) determined?

39.1.2 If not, please explain how export transmission service rates are set in relation to the rates for domestic transmission service.

39.2 With respect to the Attachment 2-page 11 reference in the preamble, if there is insufficient capacity on the transmission system to allow all of the exports seeking service to occur, how does the AESO determine which one will be scheduled?

39.3 How do circumstances under which the AESO curtails external transactions (i.e., exports) differ from those under which Ontario's IESO curtails exports?

39.4 Are AESO's export transactions subject to congestion payments?

39.4.1 If yes, under what conditions are such payments made and how are they established?

39.4.2 If yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

2.3-VECC-40

Reference: Joint Submissions, Attachment 2, pages 6 and 8-12

Preamble: It is noted while Table 1 contains MISO's rates for transmission export service there is not discussion in Section 3 of Attachment 2 regarding how the rates are determined and how firm vs. non-firm export service is scheduled.

40.1 How are MISO's annual, monthly, weekly, daily and hourly rates for export transmission service determined?

40.2 Are the rates for firm export transmission service set on a comparable basis to the rates charged for domestic transmission service (e.g. Network Service)?

40.2.1 If not, please explain how it is set in relation to the rates for domestic transmission service.

40.3 In order to maintain system reliability, does the MISO curtail export transactions prior to curtailing sales to domestic customers?

40.3.1 Does this apply to both firm and non-firm service and is priority given to firm export transactions versus non-firm export transactions?

40.4 Are MISO's export transactions subject to congestion payments?

40.4.1 If yes, under what conditions are such payments made and how are they established?

40.4.2 If yes, who benefits from the congestion payment revenues and how? In particular, are any of the revenues received factored into the determination of the export transmission tariff and, if so how?

2.3-VECC-41

Reference: Joint Submissions, Attachment 2, Appendix B

41.1 It is noted that Appendix B does not contain tables for the IESO, CAISO and the AESO setting out the Ancillary and Other Charges applicable to ETS transactions. Please provide similar tables for these three jurisdictions.

41.2 With respect to Appendix B-Table 11, please explain why the weekly charges are higher than the annual or monthly charges.

41.3 With respect to Appendix B-Table 11, please explain why the daily firm charges are higher than the annual or monthly charges.

41.4 With respect to Appendix B-Table 11, there are two set of daily non-firm charges, which are different. Please explain the differences.

41.5 Please provide table similar to Attachment 2-Table 1, that compares (in Canadian dollars) the total Ancillary and Other Charges for each of the jurisdictions versus those for the IESO.

Issue 2.4: How often should the ETS rate be set?

ISSUE 3: ARE THERE OTHER KEY ISSUES THE OEB SHOULD CONSIDER RELATED TO THE ETS RATE?

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