CCMBC INTERROGATORY 5

Issue 2.0 Usage Fees

2-CCMBC-5

INTERROGATORY

Reference: Exhibit C-1-1, Attachment 1

a) Please explain why the transmission line losses for 2022 are forecast to be 3.0 TWh when the actual transmission line losses for 2021 were only 1.9 TWh.

b) Please explain why the forecast of exports for 2022 is 15.9 TWh which is lower than any of the past 6 years which range from 17.2 TWh to 20.4 TWh.

RESPONSE

a) See response to Schedule 7 – 2.1 EP 10(e).

b) See response to Schedule 7 – 2.1 EP 10(d).

OEB STAFF INTERROGATORY 15

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2-Staff-15

INTERROGATORY

a. Exhibit A / Tab 1 / Schedule 3 / p. 2

Preamble:

Table 8 summarizes the IESO usage fees approved in the 2020/2021 IESO proceeding, and the ones proposed in the current application. At the above noted reference, the IESO states, "[t]he 2022 proposed usage fees for domestic customers represents a 4.8% increase relative to 2021 OEB approved usage fees, and the 2022 proposed usage fees for export customers represents a 7.5% decrease relative to 2021 OEB approved usage fees."

Table 8: Staffing Compensation from Capital Budget

IESO Usage Fees ($/MWh)	Approved 2021	Proposed 2022	% Change (Approved 2021 vs. Proposed 2022)
Domestic	1.271	1.3329	4.8%
Export	1.0943	1.0126	-7.5%

Questions:

a) What are the driving factors leading to the domestic usage fee increase?
b) What are the driving factors leading to the export usage fee decrease?

RESPONSE

a) The driving factor leading to a shift in fees from Export to Domestic is the magnitude of costs allocated 100% to Domestic. The components of the IESO's revenue requirement that are allocated 100% to Domestic have increased more than other costs so there is a fee increase for Domestic and decrease for Export.

The costs allocated 100% to Domestic increased from 18.5% of the revenue requirement in 2020 to 21.8% in 2022. In particular, there is a new Resource & System

Adequacy Business Unit that is allocated 100% to Domestic, and the Corporate Affairs department has shifted to 100% Domestic after Elenchus's cost allocation review. Corporate Affairs was previously allocated by relative energy volumes but this was changed to 100% Domestic because Regulatory Affairs was moved out of the department and Indigenous Relations, which had been a standalone department for the purposes of cost allocation that was allocated 100% to Domestic, was moved into Corporate Affairs. See Exhibit G-1-1 Attachment 5 – IESO Cost Allocation Methodology Review, sections 3.4 and 3.5 for more detail.

b) See response to a). The share of costs allocated by relative energy volumes, for which Export receives a share of costs, has declined relative to the share allocated 100% to Domestic.

EDA INTERROGATORY 4

Issue 1.1 Is the IESO's Fiscal Year 2022 revenue requirement of $201.5 million appropriate?

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-EDA-4

INTERROGATORY

Evidence Reference: ExB-T1-S2-Pg 8/36 / ExD-T1-S1-Pg 5/6 / ExG-T1-S1 Attachment2 *"Innovation Accomplishments"*

Preamble

DERs have been deployed throughout the province and are expected to increase in number. The OEB's Framework for Energy Innovation identified as a priority workstream LDCs use of DERs that the LDC does not have an equity position in to support the provision of distribution service.

Questions

Please assume that an LDC will use a DER situated in its licensed service area to support the provision of distribution services and that the DER will also be used to provide the LDC with a wholesale market service that was previously exclusively provided by the IESO.

a) Please discuss how the IESO would identify that the LDC had used a DER situated in its service area as an alternative source to IESO provided service.

b) Please discuss how the IESO will compute that LDC's cost of power bill for that period; please state all facts and assumptions.

c) Please identify and discuss the consequences (e.g., operational, financial) to the IESO

d) Please link this projected financial consequence to the IESO's proposed fee.

e) Please discuss any lessons learned from DER pilot projects or DER demonstration projects that the IESO either participated in or had awareness of.

RESPONSE

a) The IESO's 2022 Revenue Requirement Submission is based on a Business Plan that has been reviewed and approved by the Minister of Energy and the review of the IESO's application should be focused on the IESO's OM&A and capital expenditures. Operational and settlement impacts of potential future participation models related to DERs are not within scope of the IESO's 2022 Revenue Requirement Submission. As identified by the

EDA, the OEB's Framework for Energy Innovation[1] engagement would be a more appropriate venue for questions of this nature to be considered. In an effort to be responsive, the IESO is providing the following information.

Through its Transmission-Distribution Coordination Working Group (TDWG) the IESO is working with LDCs, DER owners, operators, aggregators, the Ontario Energy Board and other stakeholders/interested parties to establish protocols for the coordination of the operation of DERs in support of the new participation models for DERs that the IESO has committed to put in place as part of the Enabling Resources Program.

b) See response to a).

c) See response to a).

d) See response to a).

e) The IESO discusses lessons learned through pilot and demonstration projects in a number of public forums and publicly posted documents. Please see the IESO's public engagements that relate to DER pilots or demonstrations, including the IESO's DER Roadmap[2], the Grid Innovation Fund (GIF)[3], the York Region Non Wires Alternatives Demonstration[4], and the Energy Efficiency Auction Pilot.[5] In January 2022, the IESO released third-party analysis[6] from Resource Innovations (formerly Nexant) that evaluates 27 innovation projects that were funded through the IESO's GIF between 2014-2017. The IESO will also share lessons learned from DER integration pilot projects currently underway via the TDWG (referenced in response to a) above).

[1] OEB Framework for Energy Innovation engagement: https://www.oeb.ca/consultations-and-projects/policy-initiatives-and-consultations/framework-energy-innovation

[2] IESO DER Roadmap: https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Distributed-Energy-Resources-Roadmap

[3] IESO Grid Innovation Fund: https://www.ieso.ca/en/Get-Involved/Funding-Programs/Grid-Innovation-Fund/Overview

[4] IESO York Region Non Wires Alternatives Demonstration Project: https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/IESO-York-Region-Non-Wires-Alternatives-Demonstration-Project

[5] IESO Energy Efficiency Auction Pilot: https://www.ieso.ca/en/Sector-Participants/Market-Operations/Markets-and-Related-Programs/Energy-Efficiency-Auction-Pilot

[6] Resource Innovations Third-Party Analysis of Grid Innovation Fund: https://www.ieso.ca/en/Sector-Participants/IESO-News/2022/01/Grid-Innovation-Fund-Evaluation-Demonstrates-Potential-for-Cost-Savings

EDA INTERROGATORY 5

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-EDA-5

INTERROGATORY

Evidence Reference: ExC-T1-S1-Pg 2/4

Please break out the proposed IESO fee into the amount that supports MRP and the amount that supports all other IESO activities in 2022; please state all assumptions.

RESPONSE

a) As described in Exhibit C-1-1 - Revenue Requirement and Usage Fee Methodology, the IESO Usage Fee is calculated by determining the revenue requirement and then applying the charge determinants. The portion of the Usage Fee that is allocated to MRP is $0.03355 for both domestic and export, using the Elenchus cost allocation methodology and the MRP budget. See Table 1 below for calculations.

Table 1: Usage Fee Breakdown – MRP and Non-MRP Activities

Item	Unit	Domestic	Export	Total
Market Renewal	$	$4,666,581	$533,419	$5,200,000
Volumes	MWh	139,100,000	15,900,000	155,000,000
Rate Contribution	$/MWh	$0.03355	$0.03355	
Non-MRP	$	$180,732,881	$15,567,119	$196,300,000
Volumes	MWh	139,100,000	15,900,000	155,000,000
Rate Contribution	$/MWh	$1.2993	$0.9791	
Total	$	$185,399,462	$16,100,538	$201,500,000
Volumes	MWh	139,100,000	15,900,000	155,000,000
Rate	$/MWh	$1.3329	$1.0126	

EDA INTERROGATORY 6

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-EDA-6

INTERROGATORY

Evidence Reference: ExC-T1-S1-Pg2 / ExC-T1-S1-Attachment 1 *"Load and Forecast Volumes"* ExB-T1-S2 / ExG-T1-S1 Attachment2 Page 6/17 *"Innovation Accomplishments"*

Questions

a) Please assume that losses increase from 3 TWh to 4 TWh. Please quantify the impact to the proposed domestic fee and export fee; please provide the derivation of the impact.

b) Please provide the forecast and actual losses incurred by the IESO in 2021 attributable to the IESO participating in the York Region Project.

c) Please provide the impact to the forecast charge determinants, both in total and of losses, that are attributable to decarbonization.

RESPONSE

a) The sensitivity analysis showing an increase in losses from 3 TWh to 4 TWh is shown in Table 2 below. It is assumed that domestic demand and exports remain the same, with the 1 TWh increase in losses allocated as described in Exhibit C-2-1 – 2022 Revenue Requirement and Usage Fees. As a result, the domestic Usage Fee and export Usage Fee increase by approximately $0.0086/MWh and $0.0069/MWh, respectively.

Table 1: Current Usage Fees

Load	Usage Fee ($/MWh)	Energy Volumes (TWh)	IESO Budget ($M)
Domestic	1.3329	139.4	185.8
Export	1.0126	15.6	15.8
Total		155.0	201.6

Table 2: Usage Fee Sensitivity Analysis

Load	Usage Fee ($/MWh)	Energy Volumes (TWh)	IESO Budget ($M)
Domestic	1.3415	138.5	185.8
Export	1.0195	15.5	15.8
Total		154.0	201.6

b) The IESO does not currently have forecast or actual system loss impacts attributable to the York Region NWA Demonstration. There is a study underway that includes an evaluation of the impact of the participation of DERs in the wholesale energy market on the Transmission-Distribution interface, including losses. This study is scheduled to be completed in Q1 2023.

c) The impact of decarbonization is implicit within IESO's near-term demand forecast, driven by relevant policy (e.g., carbon pricing) and observed societal preference and trends (e.g., electric vehicle uptake). Generally speaking, to the extent decarbonization increases demand and costs otherwise remain the same, usage fees would decrease. See response to Schedule 8 - 1.1 ED 16(b).

EDA INTERROGATORY 7

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-EDA-7

INTERROGATORY

Evidence Reference: ExB- T1-S1-Attachment 1 *"Elenchus: IESO Cost Allocation Methodology Review"* / ExC-T1-S1-Attachment 1 *"Load and Forecast Volumes"* / ExD-T1-S1- Attachment 2-Pg5-6

Questions

a) Please discuss how de-carbonization policies are expected to impact the IESO's 2022 charge determinants forecast used to derive the proposed domestic and export usage fees.

b) Please link this impact on the proposed fee to 2022 revenues.

c) Please discuss the tactics and strategies available to the IESO if 2022 revenues are lower than the period's projected operating expenses and capital expenses.

d) Please discuss whether and how the IESO has incorporated these impacts into it 5-year financial forecast.

RESPONSE

a) See response to Schedule 6 – 2.1 EDA 6(c) and Schedule 8 – 1.1 ED 16(b).

b) Generally speaking, to the extent decarbonization increases demand and the IESO's costs otherwise remain the same, the IESO's Usage Fees would be expected to decrease.

c) If 2022 revenues are lower than expenses, the IESO could leverage the FVDA balance of $8.7 million to manage operational challenges that may arise in the short term to minimize the impact on market participants.

d) As discussed in response to a), the impact of decarbonization is implicit within the IESO's near-term demand forecast. As discussed in Exhibit C-1-1 – Revenue Requirement and Usage Fee Methodology, pg. 3-4, there is uncertainty with any forecast used to determine the IESO's Usage Fees. The IESO assesses the impacts of changing electricity demand and government policy on the forecasted revenues and expenses when developing the business plan and corresponding revenue requirement submission. As discussed in response to c), the IESO can leverage the FVDA balance of $8.7 million to manage operational challenges that may arise in the short term to minimize the impact on market participants.

EP INTERROGATORY 10

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-Energy Probe-10

INTERROGATORY

Ref.: Exhibit C Tab 1 Schedule 1 Plus Attachment 1 - (Excel Spreadsheet)

Preamble: The domestic usage fee is calculated using the most recent IESO forecast of withdrawals for use in Ontario, less estimated losses, plus generation embedded in local distribution networks.

The export usage fee is calculated using the most recent forecast of exports. Line losses are split between export and domestic customers based on their proportion of the total forecast energy volumes. The domestic forecast for the line losses calculation does not include generation from embedded generation as energy from embedded generation is not transmitted through the IESO-Controlled Grid and, as such, does not yield transmission losses.

a) Please provide the Standard deviation 2017-2021 for each of
    a. Ontario Demand
    b. Exports and
    c. Total.
b) Compare the 2021 forecasts [Domestic 132 TWh and Export 17.1TWh] to actuals. Discuss factors affecting deviations.
c) Please provide the basis for changes to 2022 forecasts from 2021.
d) Why are Exports forecast to drop to the lowest level in recent history? What are the factors?
e) Why is IESO forecasting a material increase in line losses to 3 TWH?

RESPONSE

a) The standard deviation over the 2017-2021 timeframe is:
    i. Ontario Demand (2.23 TWh)
    ii. Exports (1.21 TWh)
    iii. Total (1.85 TWh)
b) For 2021, actual Ontario demand was 133.8 TWh against a forecast of 132.4 TWh. Although some weather volatility is expected, the significantly warmer temperatures of August accounted for 0.8 TWh of the variance against forecast. The remaining 0.6 TWh of variance is associated with model and explanatory driver variances. Actual exports for

2021 were 17.2 TWh against a forecast of 17.0 TWh. Exports are impacted by the amount of Ontario generation capacity online as well as market conditions in neighbouring jurisdictions. Either of those factors could account for the 0.2 TWh variance in exports.

c) The most recent forecast incorporates actual conditions (demand, weather, economic etc.) at the time of production. As well, the forecast includes the most up to date information regarding the state of the electricity system and the projected economic drivers impacting demand.

d) The amount of nuclear capacity on outage will limit the amount of generation available for export. There is significant nuclear capacity on planned outage throughout 2022.

e) Transmission losses are forecast to be 2.2% of Ontario demand based on historical analysis at the time of system peak. Actuals vary based on power flows and weather variability.

EP INTERROGATORY 11

Issue 2.1 Is the methodology used to derive the IESO's proposed 2022 Usage Fees of $1.3329/MWh for domestic customers (including embedded generation) and $1.0126/MWh for export customers to be paid commencing January 1, 2022 appropriate?

2.1-Energy Probe-11

INTERROGATORY

Ref.: Exhibit G-1-1 Attachment 5: Elenchus Cost Allocation Study

Preamble: The Elenchus Report in Attachment 5 does not contain the updated Data tables and Allocations for 2022.

a) Please provide all of the Elenchus Data tables and Cost allocations for 2022 including specifically allocations to domestic and Export Customers.

b) Provide a summary of changes from the 2020 study.

RESPONSE

a) See response to Schedule 13 – 5.1 SEC 19.

b) See Exhibit G-1-1 Attachment 5 – IESO Cost Allocation Methodology Review, sections 3.4 and 3.5.