



# Export Transmission Service Rate Cost Allocation Methodology

Presentation Day EB-2021-0243

August 4, 2022

# Agenda

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- Introduction
- OEB Decisions
- May 2014 Methodology
- Cost Allocation Principles
- Characteristics of the Export Class
- Shared Network Allocation Scenarios
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# Introduction

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- HONI retained Elenchus to identify cost-based methodologies for allocating Shared Network Asset-related costs to exporters which includes different scenarios to take into consideration the fact that exporters do not receive the same priority access as domestic service until they are scheduled.

## HONI 2015-2016 Revenue Requirement Application

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- In advance of its 2015-2016 Transmission Revenue Requirement Application (EB-2014-0140), HONI retained Elenchus to develop a cost-based methodology to establish the ETS rate, as directed by the OEB per EB-2012-0031 Decision
- This report is described in the current proceeding as “May 2014 Methodology” or “2014 Report”

## May 2014 Methodology

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- Elenchus developed a methodology to allocate HONI's revenue requirement between Domestic and Export rate classes.
- The methodology followed the traditional three steps of a cost allocation methodology: functionalization, classification, and allocation.

# May 2014 Methodology

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## ➤ Functionalization

- Network (500 kV, 230 kV, and 115 kV lines)
  - Dual Function lines (Network portion)
  - Generation Line Connection
  - Generation Transformation Connection
  - Common (telecommunication equipment, control centre)
  - Other (facilities not allocated to other functions under normal operating conditions)
- Each function was further divided into three categories:
- Dedicated to Domestic
  - Dedicated to Interconnect
  - Shared

# May 2014 Methodology

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- Classification
  - All assets and costs were treated as demand-related
- Allocation
  - Dedicated to Domestic assets and costs were allocated 100% to Domestic
  - Dedicated to Interconnect assets and costs were allocated 100% to Export
  - Shared Asset-Related Network costs were allocated 100% to Domestic
    - Shared Asset-Related Network costs include Depreciation, Return on Capital, and Income Taxes
  - Shared Network OM&A was allocated based on a composite Net Fixed Asset allocator
    - This composite allocator was underpinned by a 12CP allocation of Shared assets

## HONI 2015-2016 Revenue Requirement Application

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- The existing ETS rate at the time was \$2.00/MWh
- The 2014 Report recommended an ETS rate of \$1.70/MWh
- In settlement, parties agreed to an ETS rate of \$1.85/MWh
  - As this rate was reached in settlement, parties note that the 2014 methodology remained untested and parties did not necessarily agree with the methodology.
  - The Board approved the Settlement Agreement
  - The \$1.85/MWh ETS rate is still in place



# HONI 2020-2022 Custom IR Decision and Order

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Decision and Order (EB-2019-0082, page 180)

- *“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 OEB does see some similarity with the rate established for attachments to distribution poles by third parties such as telecommunications and cable companies, as noted by SEC. **For pole attachments, the OEB adopted a hybrid methodology to allocate common costs.** The OEB has insufficient information to conclude what the appropriate allocation of common network costs should be for exporters. This needs to take into consideration that **while exporters make use of the network system, Hydro One does not plan its system for the benefit of exporters.** However, at the oral hearing Hydro One testified that once scheduled, with the exception of an emergency or supply issue, exporters are treated as firm as domestic load.”*

## HONI 2020-2022 Custom IR Decision and Order

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Decision and Order (EB-2019-0082, page 180)

- *“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 class. This study should be filed with Hydro One’s next transmission rebasing application.”*

# 2021 Report

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- The 2021 Elenchus Report provides three scenarios to allocate shared network costs to the Export class, taking into consideration:
  - Direction from the OEB to HONI to review the allocation of Shared Network Asset-related costs to export
  - OEB report on Pole Attachment charges
  - Elenchus jurisdictional review of cost allocation methodologies
  - IESO treatment of exports
  - Export service curtailment in recent years

# Cost Allocation Principles

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## ➤ Cost Causality

- The May 2014 Methodology was based on a strict definition of cost causality in which the Export class, as an “Interruptible” class, was not allocated any shared asset-related costs.

## ➤ “No Free Riders” Principle

- In the Pole Attachment decision, the OEB gave consideration to the value users obtain from leveraging an established network.
- The first cost allocation principle in FERC’s Transmission Planning and Cost Allocation rule (Order No. 1000) states “costs should be allocated in a way that is roughly commensurate with benefits”.
- Régie de l’énergie in Quebec has a long-standing “no free service” guiding principle for cost allocation and rate design.

# Export Class

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- The IESO considers exports to be “curtailable” rather than “interruptible”, consistent with the NERC definition of interruptible
- Exports have been affected by fewer and fewer service interruptions
  - In the top 5 peak hours of each of the past 5 years, exports were curtailed in 11 out of 25 hours.
  - In those 11 hours, an average of 10% of scheduled exports were curtailed.

# Shared Net Fixed Asset Allocator

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- Elenchus continues to recommend for an allocation underpinned by the Domestic and Export classes' relative monthly peak demands (i.e. the 12CP allocator).
- In contrast to the May 2014 Methodology, the net fixed assets allocator would be used to allocate shared asset-related costs.
- The scenarios are based on adjustments to peak demands of the Export class.
  - Fully allocated based on 12CP (unadjusted Export CP)
  - A hybrid model – Export CPs are adjusted by -50%
  - Curtailment model – Export CPs are adjusted by -20%

# Shared Net Fixed Asset Allocator

Month	System Coincident Peak MW	Domestic MW	Export MW
January	22,895	19,758	3,137
February	22,506	19,435	3,071
March	20,241	17,684	2,557
April	18,811	14,474	4,337
May	21,823	20,649	1,174
June	23,328	21,292	2,036
July	26,258	23,675	2,583
August	25,016	23,823	1,193
September	21,996	20,225	1,771
October	19,080	17,199	1,881
November	20,767	18,654	2,113
December	23,313	20,738	2,575
<b>Total (12 CP)</b>	<b>266,034</b>	<b>237,606</b>	<b>28,428</b>

Scenario	Allocator	Domestic		Export	
		MW	%	MW	%
Fully Allocated	12 CP	237,606	89.3%	28,428	10.7%
Hybrid Model	12 CP -50%	237,606	94.4%	14,214	5.6%
Curtailement Model	12 CP -20%	237,606	91.3%	22,742	8.7%

# Cost Allocation Scenarios

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- Fully Allocated
  - Unadjusted 12CP allocation recognizes the extent that Export demands are curtailed during coincident peaks.
- Hybrid Model
  - Provides a reduced allocation recognizing that Exports do not receive the same system access as Domestic loads. The 50% 12CP reduction is aligned with the Pole Attachment hybrid methodology cited by the OEB in its direction in the 2021-2022 decision.
- Curtailment Model
  - Provides a reduced allocation recognizing that Exports do not receive the same system access as Domestic in proportion to the extent that Exporters are curtailed. The 20% 12CP reduction is aligned with the percentage of total hours in which exports are curtailed.



# Cost Allocation Scenarios

Methodology	Allocator for Shared Network Asset-related costs		ETS Rate (\$/MWh)
	Domestic Share	Export Share	
OEB 2020 Approved ETS rate			\$1.85
2014 Report Methodology	Domestic 12CP	-	\$1.67
Allocation on Basis of 100% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP	\$6.07
Allocation on Basis of 50% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP * 50%	\$3.40
Allocation on Basis of 80% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP * 80%	\$5.03

# Cost Allocation Scenarios

- The report was prepared using HONI's functionalized transmission revenue requirement.
- Elenchus' view is that a provincial ETS rate based on cost allocation should also include the revenue requirements of other Ontario transmitters.
- The following table provides the ETS rates adjusted for the Network Pool revenue requirements of all Ontario transmitters.

Methodology	Allocator for Shared Network Asset-related costs		Adjusted ETS Rate (\$/MWh)
	Domestic Share	Export Share	
Allocation on Basis of 100% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP	\$6.54
Allocation on Basis of 50% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP * 50%	\$3.66
Allocation on Basis of 80% of Shared Net Fixed Assets	Domestic 12CP	Export 12CP * 80%	\$5.42

# Additional Changes

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- The following changes have been made to the 2014 ETS cost allocation methodology
  - Since the Export class receives a portion of shared network asset-related costs, portions of External Revenues and Deferral and Variance Accounts associated with those incurred costs are also allocated to the Export class.
  - Costs related to interties are allocated based on relative import and export volumes in peak hours (Intertie 12CP).
  - Shared OM&A is allocated based on the allocation of shared net fixed assets, rather than the allocation of all net fixed assets.
  - The volume used as the billing determinant is the actual Export MWh in the most recent year to align with the period of the coincident peak load data.

# Summary

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- The report describes methodologies considered by Elenchus to allocate shared network asset-related costs to the Domestic and Export classes based principally on cost causality.
- Elenchus' view is that the extent to which the the OEB should change ETS rates to reflect those network costs is a policy question for the OEB to determine relative to other considerations.