



January 17, 2022

Nancy Marconi
Acting Registrar
Registrar
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Re: EB-2021-0110 Hydro One Networks Inc. 2023-2027 Joint Transmission & Distribution Rate Application
Motions Hearing

Dear Ms. Marconi:

In accordance with Procedural Order No. 3 dated January 13, 2022, below is information related to AMPCO's undertakings/interrogatories at issue and the rationale for why the requested information is relevant and should be produced by Hydro One Networks Inc. (Hydro One).

1. Technical Transcript Day 1, Page 47, Lines 21-22 (KT 1.1 and KT 1.2)

On behalf of SEC/AMPCO, SEC requested that Hydro One complete two similar excel spreadsheets prepared by SEC/AMPCO, one for Transmission assets (KT1.1)¹ and one for Distribution assets (KT1.2)² that would provide a breakdown of the quantity of major assets by Composite Index Scores and other sub-factor data³ used by Hydro One to develop a multi-faceted picture of asset risks and asset-specific investment needs. At AMPCO-040 c) and d)⁴ and JT1.5, Hydro One provides the relative weightings for each of the six key sub-factors, for major transmission and distribution asset categories, used to arrive at a composite score of all of the factors.⁵ The requested information is used by Hydro One to identify assets that require attention.⁶ Planners consider these factors when making recommendations regarding what investments should be made within an identified timeframe.⁷ This information is clearly relevant to assessing the appropriateness of Hydro One's Transmission and Distribution capital planning, spending and pacing choices.⁸ The information is readily available to Hydro One and should be produced.⁹

¹ Attachment #1

² Attachment #2

³ Condition, Demographics, Criticality, Performance, Utilization, Economics, Obsolescence, Health & Safety, Environmental

⁴ Exhibit I Tab 3 Schedule B1-AMPCO-004 Page 4-5

⁵ Transcript Volume 1 Page 49 Lines 18-20

⁶ Transcript Volume 1 Page 45 Lines 11-15

⁷ EB-2016-0160 Exhibit B1 Tab 2 Schedule 5 Page 2

⁸ Issue #9 & Issue #12

⁹ Exhibit I-1-B2-Staff-76 Attachment 2, 7, 8; JT1.20

2. **B2-AMPCO-018¹⁰: Technical Transcript Day 1, Page 161, Lines 8-11**

Hydro One has changed its depiction of how asset condition is stated and has moved from showcasing asset condition on 5 categories to 3 categories.¹¹

EB-2021-0110	EB-2019-0082
Good Condition	Very Low Risk
	Low Risk
Fair Condition	Fair Risk
Poor Condition	High Risk
	Very High Risk

B2-AMPCO-018 included an excel spreadsheet¹² requesting that Hydro One provide transmission asset condition data for the years 2016, 2018 and 2020 using the same five condition categories as was used in EB-2019-0082. This information is relevant and important to ensure asset condition is comparable over time. Other parties requested the same information.¹³ Hydro One indicates condition-based renewal is the cornerstone of Hydro One's asset management and investment planning processes,¹⁴ and asset condition is the primary driver of replacement decisions.¹⁵ This further breakdown of asset condition information is needed to assess the appropriateness of Hydro One's Transmission capital planning, spending and pacing choices. B2-AMPCO-018 requests this asset condition information (which is a sub-set of KT1.1) be provided on the same basis for the years 2016, 2018 and 2020 as asset condition in any given year provides a static view¹⁶, and the change in asset condition over time across the five condition categories will provide the OEB with a more dynamic view of the condition of Hydro One's Transmission system. The information is readily available to Hydro One and should be produced.¹⁷

Best Regards,



Colin Anderson
President

Copy to: Hydro One Networks Inc.

¹⁰ Exhibit I-03-B2-AMPCO-018

¹¹ Exhibit I Tab 22 Schedule B2-SEC-069 Page 1

¹² Attachment #3

¹³ B2-Staff-040 part c); B2-SEC-063

¹⁴ Exhibit B-2-1 Section 2.2 Page 1

¹⁵ Exhibit B-2-1 Section 2.2 Page 1

¹⁶ EB-2016-0160 Exhibit B1 Tab 2 Schedule 4 Page 6

¹⁷ Exhibit I-1-B2-Staff-76; JT1.20

Attachment #1: KT1.1

Transmission Asset Risk Assessment

Composite Index						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Condition						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Utilization						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Performance						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Criticality						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Economics						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Demographics						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Network Transformers (#)						
Connection Transformers (#)						
Conductors (km)						
Circuit Breakers (#)						
Protection and Control Systems (#)						
Insulators (#)						
Wood Poles (#)						
U/G Cable (km)						

Obsolescence			
Asset	Population	Yes	No
Network Transformers (#)			
Connection Transformers (#)			
Conductors (km) (#)			
Circuit Breakers (#)			
Protection and Control Systems (#)			
Insulators (#)			
Wood Poles (#)			
U/G Cable (km)			

HS&E			
Asset	Population	Yes	No
Network Transformers (#)			
Connection Transformers (#)			
Conductors (km) (#)			
Circuit Breakers (#)			
Protection and Control Systems (#)			
Insulators (#)			
Wood Poles (#)			
U/G Cable (km)			

PCB			
Asset	Population	Yes	No
Network Transformers (#)			
Connection Transformers (#)			
Conductors (km) (#)			
Circuit Breakers (#)			
Protection and Control Systems (#)			
Insulators (#)			
Wood Poles (#)			
U/G Cable (km)			

Distribution Asset Risk Assessment

Composite Index						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Condition						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Utilization						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Performance						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Criticality						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Economics						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Demographics						
Asset	Population	Very Good (1-15)	Good (>15-30)	Fair (>30-50)	Poor (>50-70)	Very Poor (>70-100)
Station Transformers (#)						
Mobile Unit Substations (#)						
Reclosers (#)						
Circuit Breakers (#)						
Station Structures (#)						
MUS Structures (#)						
Poles (#)						

Obsolescence			
Asset	Population	Yes	No
Station Transformers (#)			
Mobile Unit Substations (#)			
Reclosers (#)			
Circuit Breakers (#)			
Station Structures (#)			
MUS Structures (#)			
Poles (#)			

HS&E			
Asset	Population	Yes	No
Station Transformers (#)			
Mobile Unit Substations (#)			
Reclosers (#)			
Circuit Breakers (#)			
Station Structures (#)			
MUS Structures (#)			
Poles (#)			

PCB			
Asset	Population	Yes	No
Station Transformers (#)			
Mobile Unit Substations (#)			
Reclosers (#)			
Circuit Breakers (#)			
Station Structures (#)			
MUS Structures (#)			
Poles (#)			

Attachment #3

B2-AMPCO-18-Attachment #1

Major Asset Condition Summary

Ref: EB-2019-0082 I-12-AMPCO-26-01

Major Asset Condition Summary								
2016								
Asset Type	Very Low Risk*	Low Risk	Fair Risk	High Risk	Very High Risk*	To be Assessed	Total Population	% High Risk & Very High Risk
Transformers	336	163	95	99	23		716	17%
Circuit Breakers	2035	1475	804	293	167		4,774	10%
Protection Systems	4,800	3,846	497	2,387	976		12,506	27%
Conductors (km)	16,050		3,316	3,680		6,061	29,107	13%
Wood Poles	-	17,640	0	5,460		18,900	42,000	13%
Underground Cables (km)	-	179	77	8		0	264	3%
Insulators								

* These categories are not used for all assets.

Major Asset Condition Summary								
2018								
Asset Type	Very Low Risk*	Low Risk	Fair Risk	High Risk	Very High Risk*	To be Assessed	Total Population	% High Risk & Very High Risk
Transformers	336	163	95	99	23		716	17%
Circuit Breakers	2035	1475	804	293	167		4,774	10%
Protection Systems	4,800	3,846	497	2,387	976		12,506	27%
Conductors (km)	16,050		3,316	3,680		6,061	29,107	13%
Wood Poles	-	17,640	0	5,460		18,900	42,000	13%
Underground Cables (km)	-	179	77	8		0	264	3%
Insulators								

* These categories are not used for all assets.

Major Asset Condition Summary								
2020								
Asset Type	Very Low Risk*	Low Risk	Fair Risk	High Risk	Very High Risk*	To be Assessed	Total Population	% High Risk & Very High Risk
Transformers								
Circuit Breakers								
Protection Systems								
Conductors (km)								
Wood Poles								
Underground Cables (km)								
Insulators								

* These categories are not used for all assets.