

**Hydro One Networks Inc.**

7<sup>th</sup> Floor, South Tower  
483 Bay Street  
Toronto, Ontario M5G 2P5  
www.HydroOne.com

Tel: (416) 345-5680  
Cell: (416) 568-5534  
Frank.Dandrea@HydroOne.com

**Frank D'Andrea**

Vice President, Regulatory Affairs & Chief Risk Officer



BY COURIER

October 24, 2019

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
P.O. Box 2319  
Toronto, ON M4P 1E4

Dear Ms. Walli,

**EB-2019-0082 – Hydro One Network's 2020-2022 Transmission Rates Application –  
Undertaking Responses J 1.2, J 1.3, J 1.4, J 1.5, J 2.1**

---

Attached please find the following undertaking responses in respect of the above noted proceeding:

- J 1.2: Calculation of the capital program accomplishment measure (composite index).
- J 1.3: Targets for the metrics provided in JT 1.16.
- J 1.4: Updated scorecards with trend arrows for 2019 for System Reliability measures.
- J 1.5: Clarington TS budget numbers.
- J 2.1: Details regarding the thresholds for increasing versus stable trend in slide 7 of the 2016 performance trend.

This filing has been submitted electronically using the Board's Regulatory Electronic Submission System and two (2) hard copies will be sent via courier.

Sincerely,

ORIGINAL SIGNED BY KATHLEEN BURKE ON BEHALF OF FRANK D'ANDREA

Frank D'Andrea

## UNDERTAKING J1.2

1  
2  
3 **Reference:**

4 JT 2.25

5  
6 **Undertaking:**

7 To explain the calculation in the capital program accomplishment composite index

8  
9 **Response:**

10 The *Capital Program Accomplishment (composite index)* measure is calculated as follows:

11  
12 
$$\text{Capital Program Accomplishment (composite index)} = \frac{\text{Weighted Index}_{3,4,6,8,11,12}}{\text{Weighthing}_{3,4,6,8,11,12}} = \frac{18.0+8.3+16.2+7.9+1.6+2.6}{17.0+8.3+6.2+9.2+2.1+2.7} = 120.0\%$$

13  
14 The *Capital Program Accomplishment (composite index)* is the sum of the TX Segment Weighted Index values divided by the sum  
15 of the TX Segment Weighting values.

16  
17 The scorecard has been updated as per JT 2.25.

18  
Witness: Andrew Spencer

1

	Work Item	Segment	Units	Budget (n)	Weighting (n)	Units Planned (n)	Units Forecasted (n)	Completion (n)	Weighted Index (n)
(n)					$\frac{\text{Budget}_{(n)}}{\text{Budget}_{\text{Total}}}$			$\frac{\text{Units Forecasted}_{(n)}}{\text{Units Planned}_{(n)}}$	$\frac{\text{Completion}_{(n)}}{\text{Weighting}_{(n)}} \times$
1	End of Life Replacement of Wood Poles	Dx	# of poles	\$73.8	19.9%	9,600	6,088	63.4%	12.6%
2	Residential, Subdivision, Expansion	Dx	# of connects	\$65.5	17.7%	14,724	17,321	117.6%	20.8%
3	Tx Lines Insulator Replacement Program	Tx	# of circuit structures	\$63.2	17.0%	3,700	3,905	105.5%	18.0%
4	Steel Structure Coating Program	Tx	# of structures	\$30.8	8.3%	1,050	1,051	100.1%	8.3%
5	Dx Capital Trouble Call Poles & Equipment	Dx	# of poles/equipment	\$24.0	6.5%	3,376	2,842	84.2%	5.5%
6	Purchase of Spare Transformers Program	Tx	# of transformers	\$23.1	6.2%	5	13	260.0%	16.2%
7	Customer Upgrade	Dx	# of upgrades	\$17.5	4.7%	4469	3,958	88.6%	4.2%
8	Tx Wood Pole Replacement	Tx	# of structures	\$34.1	9.2%	850	735	86.5%	7.9%
9	PCB Overhead Equipment Replacement	Dx	# of transformers	\$11.6	3.1%	2152	1,744	81.0%	2.5%
10	DS Station Refurbishment Program	Dx	# of stations	\$9.3	2.5%	5	2	40.0%	1.0%
11	Tx Lines Foundation Assess/Clean	Tx	# of structures	\$7.7	2.1%	800	628	78.5%	1.6%
12	Shieldwire Replacement Program	Tx	# of KM of shieldwire replaced	\$10.1	2.7%	220	209	95.1%	2.6%
				<b>Budget Total</b>					<b>\$370.7</b>

Witness: Andrew Spencer

### UNDERTAKING J1.3

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11

**Reference:**

JT-1.16

**Undertaking:**

To provide the forecasts that have targets and what those targets are.

**Response:**

The table below expands on the metrics provided in JT 1.16 to differentiate between those metrics that have targets and those that are reported upon for informational and ongoing trending purposes.

1

Metric	Report vs Target	Objective
On-time: Project In-Service Date Forecast versus Current Approved	Report	Completed consistently with approved schedule to achieve benefits
On-time: Project In-Service Date Forecast versus Original Approved	Report	
On-budget: Gross Project Total Forecast versus Current Approved	Report	Complete within AACE Estimate Class Range documented in original approval assuming no material changes in scope.
On-budget: Gross Project Total Forecast versus Original Approved	Report	
<b>Portfolio Level Metrics:</b>		
In-Service Additions: Annual Forecast versus Budget	Target: 100%	Completion of portfolio commitments against plan to achieve investment benefits
Capital Expenditures: Annual Forecast versus Budget	Target: 100%	
Portfolio Risk: Number of Projects Forecasting a Major Variance (+/- 10%) to Budget	Report	1 – Ensure oversight and project control effectiveness 2 - To identify significant variances (+/- 10%) to budget where a variance approval is required 3 - Strive for year over year improvements
Portfolio Risk: Value of Projects Forecasting a Major Variance (+/- 10%) to Budget	Report	
Project Cost Performance: Number of Projects complete within AACE Estimate Class Range documented in original approval	Target: 100%*	Demonstrated effectiveness of Project Definition and Execution Processes
Project Cost Performance: Value of Projects complete within AACE Estimate Class Range documented in original approval	Target: 100%*	
Cost Variance Distribution: Portion of Project Portfolio Delivered On Budget, Over Budget, Under Budget	Report	1 - Demonstrated effectiveness of Project Definition and Execution Processes 2 - Strive for a balanced distribution of projects over and under budget
Cost Variance Distribution: Standard Deviation of Project Cost Performance represented as a percentage of original Budgets	Report	1 - Demonstrated effectiveness of Project Definition and Execution Processes 2 - Strive for year over year improvements by reducing standard deviation of variances overtime
Schedule Variance Distribution: Portion of Project Portfolio Delivered On-time, Late, Early	Report	
Schedule Variance Distribution: Standard Deviation of Schedule Variance in Days	Report	

2 \*Assuming no material changes in scope

Witness: Andrew Spencer



Performance Outcomes	Performance Categories	Measures	2014	2015	2016	2017	2018	Trend	Targets	
									2018	
Customer Focus	Customer Satisfaction	Satisfaction with Outage Planning Procedures (% Satisfied)	86	92	89	94	85		85	
		Overall Customer Satisfaction (% Satisfied)	77	85	78	88	90		86	
	Service Quality	Customer Delivery Point (DP) Performance Standard Outliers as % of Total DPs	11.8	14.3	9.7	9.5	10.1		13.0	
Operational Effectiveness	Safety	Recordable Incidents (# of recordable injuries/illnesses per 200,000 hours worked)	1.8	1.7	1.1	1.2	1.1		1.1	
	System Reliability	T-SAIFI-S (Ave. # Sustained interruptions per Delivery Point)	0.60	0.59	0.46	0.65	0.83	🔴	0.58	
		T-SAIFI-M (Ave. # of Momentary interruptions per Delivery Point)	0.48	0.50	0.33	0.47	0.50	🟢	0.53	
		T-SAIDI (Ave minutes of interruptions per Deliver Point)	36.7	43.9	80.8	42.8	70.0	🔴	46.5	
		System Unavailability (%)	0.48	0.63	0.70	0.69	0.83	🔴	0.42	
		Unsupplied energy (minutes)	12.2	11.8	11.4	13.2	19.5	🔴	12.6	
	Asset & Project Management	Transmission System Plan Implementation Progress (%)	99	105	100	94	99		100	
		CapEx as % of Budget	90	106	105	100	97		100	
		OM&A Program Accomplishment (composite index)		97	99	108	107		100.0	
		Capital Program Accomplishment (composite index)		122	59	88	120		100.0	
	Cost Control	Total OM&A and Capital per Gross Fixed Asset Value (%)	8.4	9.0	8.6	7.9	7.7		7.7	
		OM&A per Gross Fixed Asset Value (%)	2.7	2.9	2.5	2.3	2.3		2.2	
		Line Clearing Cost per kilometer (\$/km)	2,495	2,234	1,966	2,100	2,797		2,295	
		Brush Control Cost per Hectare (\$/Ha)	1,624	1,566	1,542	1,356	1,539		1,625	
Public Policy Responsiveness	Connection of Renewable Generation	% on-time completion of renewables customer impact assessments	100	100	100	100	100		100	
	Regional Infrastructure Planning (RIP) &	Regional Infrastructure Planning progress - Deliverables met, %	100	100	100	100	100		100	
	Long-Term Energy Plan (L-TEP) Right-Sizing	End-of-Life Right-Sizing Assessment Expectation				Met	Met		Met	
Financial Performance	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)	0.69	0.13	0.20	0.13	0.12			
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio	1.16	1.39	1.43	1.47	1.53			
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.36	9.30	9.19	8.78	9.00		
			Achieved	13.12	10.93	10.02	9.03	11.08		

Legend: 5-year trend  
 🟡 up 🟢 down 🟠 flat  
 Current year  
 ● target met ● target not met

**UNDERTAKING J1.5**

**Reference:**

I-02-13 p 2 line 6

**Undertaking:**

To clarify the clarington numbers.

**Response:**

	<b>Original Business Case Approval</b>	<b>As Filed EB-2016-0160 (\$M)</b>	<b>As a result of the DRO**</b>	<b>Current Forecast (\$M)*</b>
<b>Reference Date</b>	Jun 2013	May 2016	Nov 2017	Sep 2019
<b>Project Total (Net)</b>	\$ 296.6	\$ 280.7	\$ 244.1	\$ 242.3
<b>2017 Net Capex</b>		\$ 68.6	\$ 29.9	\$ 29.8
<b>2018 Net Capex</b>		\$ 14.8	\$ 21.9	\$ 14.6
<b>Contingency***</b>	\$ 59.9	\$ 59.9	\$ 3.3	\$ 0.0

\*The values for 2017 and 2018 capex in the Current Forecast are actuals

\*\* DRO = Draft Rate Order filed

\*\*\* Contingency is included in the Project Total

The lower forecast results primarily from unused contingency funds originally allocated to potential risks which did not materialize.

The original approval for Clarington TS occurred in 2013; since then there have been considerable improvements to contingency definition and management practices as per 2019-03-21, B-2-1, pages 12-13.

Witness: Andrew Spencer



## UNDERTAKING J2.1

1  
2  
3 **Reference:**

4 Exhibit A, Tab 7, Schedule 2, Attachment 3, Slide 7  
5

6 **Undertaking:**

7 With reference to slide 7, 2016 performance trend, to provide details on threshold of  
8 increasing versus stable trend  
9

10 **Response:**

11 The term “trend” reflects the status of 2016 performance of delivery points serving First  
12 Nations communities, relative to the Customer Delivery Point Performance Standard, as  
13 detailed in Exhibit D, Tab 2, Schedule 1, Attachment 1.  
14

15 The following outlines the threshold associated with the trend designations, based on  
16 2016 performance:

- 17 • **Increasing duration of interruptions:** Delivery point is an outlier from a  
18 Duration perspective (Individual or Group)
- 19 • **Increasing frequency of interruptions:** Delivery point is an outlier from a  
20 Frequency perspective (Individual or Group)
- 21 • **BOTH:** Delivery point is an outlier from both a Frequency (Individual or Group)  
22 and Duration (Individual or Group) perspective
- 23 • **STABLE:** Delivery point is neither a group or individual outlier