

EB-2019-0082

**HYDRO ONE
TRANSMISSION
EB-2019-0082**

**VECC COMPENDIUM Panel 2
Part II**

October 28, 2019

TAB 1

OEB INTERROGATORY #11

Reference:

A-04-01 p.10-11

Capital In-Service Variance Account

Interrogatory:

In Section 2.2 of this Exhibit, Hydro One has proposed a Capital In-Service Variance Account (CISVA) as a component of its proposed Custom IR plan. Hydro One proposes that the CISVA have the following features:¹

1. The account will track the impact on revenue requirement of any in-service additions that are on a cumulative basis 98% or lower of the OEB-approved amount for each year of the Custom IR term;
2. For cumulative in-service additions that are 98% or lower of the OEB-approved level, the associated revenue requirement impact will be computed and reported on an annual basis in the variance account; and
3. At the end of the three-year term of the Custom IR Plan, in 2022, the sum of the variances in each year will be disposed of for the benefit of customers with the following conditions;
 - Revenue requirement associated with variances in in-service additions resulting from verifiable productivity gains will be excluded from the calculation; and
 - Account will be asymmetrical, meaning that should the cumulative in-service additions in any year of the Custom IR term exceed 98% of the cumulative OEB-approved amount for that period, no entry will be made in the variance account and no amount will be recoverable from ratepayers

- a) Is Hydro One's proposal for the CISVA that same as Hydro One Networks proposed in its most recent distribution Custom IR plan in EB-2017-0049? Is it the same as the OEB approved in its Decision with Reasons EB-2017-0049? Please document any differences.
- b) Hydro One has proposed a Custom IR revenue requirement adjustment with $X = 0$ (both base productivity and stretch factors are 0, as supported by PSE in its report). If

¹ Exhibit A/Tab 4/Schedule 1/pp. 10-11

1 the Custom IR plan is approved as proposed, please explain how the first condition of
2 item 3) will be calculated:

- 3 • Revenue requirement associated with variances in in-service additions
4 resulting from verifiable productivity gains will be excluded from the
5 calculation

6
7 What will be “verifiable productivity gains”?

8
9 **Response:**

10 a) The mechanics of Hydro One’s proposal for a Capital In-Service Variance Account
11 (CISVA) are largely the same as was previously proposed and approved in the Hydro
12 One Distribution application.

13
14 b) Hydro One is proposing a CISVA with several key features as discussed further in
15 Exhibit A, Tab 4, Schedule 1 pages 10-11. One such feature is that revenue
16 requirement associated with variances in in-service additions resulting from verifiable
17 productivity gains will be excluded from the calculation of the CISVA. Verifiable
18 productivity gains refer to additional capital-related productivity gains beyond those
19 identified and included in the current revenue requirement (current revenue
20 requirement includes specific productivity savings and progressive productivity
21 savings) in order to ensure that further productivity savings are incented throughout
22 the term of the custom IR period. The process associated with achieving and
23 quantifying verifiable savings places the onus on Hydro One to prove the
24 achievement of these savings in future rate proceedings. Further details regarding the
25 process for identifying and measuring verifiable productivity gains are provided in
26 Section 1.6 of the TSP.

TAB 2

1 earlier). As the IESO has now determined that supply needs West of Thunder Bay and
2 North of Dryden will be met by electricity infrastructure (a 'wires' solution), Hydro One
3 believes that it is now able to record its development expenditures in CWIP. On
4 December 21, 2018, Hydro One requested the OEB to change the nature of the Waasigan
5 Transmission Line Deferral Account (NWBTL Account) from a deferral account to a
6 tracking deferral account. Hydro One would continue to report the balance of this account
7 through the quarterly Reporting and Record Keeping Requirements. Hydro One
8 requested the change in this account be effective from January 1, 2019. Refer to Exhibit
9 H, Tab 1, Schedule 2 Attachment 9 for a copy of this submission. The request is currently
10 under review by the OEB.

11
12 Included in the balance submitted for approval is interest forecast through to December
13 31, 2019 to reflect carrying charges anticipated through to the proposed implementation
14 date. This will result in a forecast asset account balance of \$0.9 million at the end of
15 2019.

16 **2.12 IN SERVICE CAPITAL ADDITIONS VARIANCE ACCOUNT**

17
18 As per the Settlement Agreement approved by the OEB, relating to Hydro One
19 Transmission's 2015 and 2016 rates in EB-2014-0140, parties agreed that Hydro One
20 would establish a net cumulative asymmetrical variance account for 2014, 2015 and 2016
21 to track the impact on revenue requirement of any in-service addition shortfall compared
22 to OEB approved amounts, for disposition in a future rates application. The cumulative in
23 service additions for those years exceeded the OEB-approved amount and therefore no
24 entry was recorded.

25
26 As part of the EB-2016-0160 Decision, the OEB approved the continuance of this
27 account to record the impact on 2017 and 2018 Transmission Revenue Requirement due

Witness: Samir Chhelavda

1 to an actual amount for 2016 in-service additions that is less than \$911.7 million, along
2 with the difference between the 2017 and 2018 in-service additions embedded in 2017
3 and 2018 rate base and actual in-service additions in each of those years. As at
4 December 31, 2018, the account had a liability balance of \$0.6 million. This account is
5 reported to the OEB on a quarterly basis consistent with the OEB's Reporting and Record
6 Keeping Requirements.

7
8 Included in the balance submitted for approval is interest forecast through to December
9 31, 2019 to reflect carrying charges anticipated through to the proposed implementation
10 date. This will result in a forecast liability balance of \$0.6 million at the end of 2019.

11 **3. REGULATORY ACCOUNTS NOT BEING REQUESTED FOR** 12 **DISPOSITION**

13 14 **3.1 EAST WEST TIE DEFERRAL ACCOUNT**

15
16 This account was approved by the OEB on July 12, 2012 in Hydro One's application
17 (EB-2012-0180) to establish a deferral account related to the East-West Tie Line
18 proceeding (EB-2011-0140).

19
20 Hydro One was permitted to track costs in the EWTDA that relate to the following two
21 categories:

- 22 1. costs incurred by Hydro One Transmission as incumbent transmitter to support
23 the OEB through the designation process and to eventually facilitate the line's
24 connection; and
- 25 2. expenditures incurred relating to preliminary engineering and other station
26 connection work required to accommodate the East West Tie line.

27
Witness: Samir Chhelavda

- **Immediate / Short-term Compliance** – Explicit obligation to a regulatory agency (e.g. OEB requires work to be done *within a year* with *immediate risk* of legal breach, or there is a *two to five-year risk* of regulatory or legal breach);
- **Third party requests** – Explicit connection request by a city, county, agency, or customer, with a *one to five-year risk* of breaking the utility obligation to serve;
- **Contractual** – Signed, fixed-sum contracts with third parties for services such as IT support, facility support, etc.; and
- **In-Flight** – Project already under construction.

In some cases, mandatory investments were not re-scored because they were in-flight, or were scored low based on a compliance obligation.

	ISD	ISD Name	2019-2024 Spend (\$ M)	Total Risk Mitigation	Risk Spend Efficiency ¹
Mandatory ²	SA-01	Connect New IAMGOLD Mine	10	-	-
	SA-02	Horner TS: Build a Second 230/27.6kV Station	6	-	-
	SA-03	Halton TS: Build a Second 230/27.6kV Station	6	-	-
	SA-04	Connect Metrolinx Traction Substations	11	-	-
	SA-05	Future Transmission Load Connection Plans	19	-	-
	SA-06	Protection and Control Modifications for Distributed Generation	-	879,930	500,000
	SA-07	Secondary Land Use Projects	-	-	-
	SR-01	Air Blast Circuit Breaker Replacement Projects	219	10,897,936	49,845
	SR-02	Station Reinvestment Projects	142	115,142	813
	SR-03	Bulk Station Transformer Replacement Projects	20	251,406	12,274
	SR-05	Load Station Transformer Replacement Projects	51	65,233	1,272
	SR-06	Load Station Switchgear and Ancillary Equipment Replacement Projects	20	21,795	1,088
	SR-10	Transformer Protection Replacement	7	-	-
	SR-15	Telecom Fibre IRU Agreement Renewals	15	3,190,264	206,982
	SR-19	Transmission Line Refurbishment - End of Life ACSR, Copper Conductors & Structures	49	585,075	11,967
	SR-24	Transmission Line Shieldwire Replacement	74	665,383	8,982
	SR-26	Transmission Line Emergency Restoration	59	1,992,879	33,552

¹ Investments with an efficiency rating of 0 are either in-flight or driven by regulatory compliance, contractual commitments, customer requests or economical efficiencies.

² Certain System Renewal investment are included in both the Mandatory and Discretionary categories based on the taxonomies as certain sites are currently in-flight. Refer to TSP 2.1 pages 37-38 for mandatory/discretionary categorization.

	ISD	ISD Name	2019-2024 Spend (\$ M)	Total Risk Mitigation	Risk Spend Efficiency ¹
	SS-01	Lennox TS: Install 500kV Shunt Reactors	46	-	-
	SS-02	Wataynikaneyap Power Line to Pickle Lake Connection	30	-	-
	SS-03	Nanticoke TS: Connect HVDC Lake Erie Circuits	-	-	-
	SS-04	East-West Tie Connection	127	-	-
	SS-05	St. Lawrence TS: Phase Shifter Upgrade	18	-	-
	SS-06	Merivale TS to Hawthorne TS: 230kV Conductor Upgrade	24	-	-
	SS-07	Milton SS: Station Expansion and Connect 230kV Circuits	194	-	-
	SS-08	Northwest Bulk Transmission Line	35	-	-
	SS-09	Barrie Area Transmission Upgrade	75	-	-
	SS-10	Kapuskasing Area Transmission Reinforcement	28	-	-
	SS-11	South Nepean Transmission Reinforcement	1	-	-
	SS-12	Alymer-Tillsonburg Area Transmission Reinforcement	30	-	-
	SS-13	Leamington Area Transmission Reinforcement	206	-	-
	SS-14	Southwest GTA Transmission Reinforcement	33	-	-
	SS-15	Future Transmission Regional Plans	44	-	-
	SS-16	Customer Power Quality Program	20	-	-
		Less than \$3M	296	5,272,230	17,814
Discretionary	GP-02	Grid Control Network Sustainment	41	772,412	18,926
	GP-05	Transmission Non-Operational Data Management System	23	25,420	1,125
	SA-07	Secondary Land Use Projects	7	-	-
	SR-01	Air Blast Circuit Breaker Replacement Projects	464	60,937,116	131,344
	SR-02	Station Reinvestment Projects	458	22,478,975	49,088
	SR-03	Bulk Station Transformer Replacement Projects	392	22,150,917	56,472
	SR-04	Bulk Station Switchgear and Ancillary Equipment Replacement Projects	176	65,981,862	374,265
	SR-05	Load Station Transformer Replacement Projects	719	10,637,910	14,799
	SR-06	Load Station Switchgear and Ancillary Equipment Replacement Projects	225	10,137,180	45,150
	SR-07	Protection and Automation Replacement Projects	64	10,084,973	158,113
	SR-08	John Transformer Station Reinvestment Project	86	1,465,442	17,038
	SR-09	Transmission Station Demand and Spares and Targeted Assets	243	7,269,990	29,886
	SR-11	Legacy SONET System Replacement	115	1,008,208	8,731
	SR-13	ADSS Fibre Optic Cable Replacements	4	484,854	114,499

Witness: Bruno Jesus

	ISD	ISD Name	2019-2024 Spend (\$ M)	Total Risk Mitigation	Risk Spend Efficiency ¹
	SR-14	Mobile Radio System Replacement	20	201,590	10,170
	SR-19	Transmission Line Refurbishment - End of Life ACSR, Copper Conductors & Structures	481	996,525	2,072
	SR-20	Transmission Line Refurbishment - Near End of Life ACSR Conductor	506	355,060	702
	SR-21	Wood Pole Structure Replacements	300	12,487,336	41,607
	SR-22	Steel Structure Coating Program	111	-	-
	SR-25	Transmission Line Insulator Replacement	407	14,289,148	35,117
	SR-27	C5E/C7E Underground Cable Replacement	127	176,963	1,390
	SR-28	OPGW Infrastructure Projects	32	321,485	10,041
		Less than \$3M	402	20,108,484	50,065
Excluded		Less than \$3M	360	32,790,878	91,171

As part of Enterprise Engagement and Challenge Sessions, trade-off decisions assess which investments should be promoted or demoted based on the following levers:

- **Risk:** Is Hydro One comfortable with the remaining risk? Are there unfunded investments which mitigate large risks?
- **Flags (non-risk parameters):** Which investments need to be funded for non-risk merits?

The consideration of risk efficiency and risk mitigated per dollar and other considerations supports the making of prudent and data-driven trade-off decisions. Investments that were prioritized out of the plan (“Excluded”) have not been included in this application; examples of these candidate investments included power system telecom investments, station reinvestment and component replacements, replacement of wood pole structures in non-publicly accessible locations, and future line refurbishments which are expected to be assessed to be end-of-life at a later date.

1

Table 1 - Forecast Period Capital Expenditure Summary

OEB Category	Forecast (Planned \$M)				
	2020	2021	2022	2023	2024
System Access	24.8	11.3	11.7	12.7	4.1
System Renewal	865.2	1,103.1	1,172.8	1,177.4	1,193.8
System Service	204.1	148.2	151.8	174.3	204.2
General Plant	115.4	94.4	94.7	83.6	58.9
Progressive Productivity Placeholder	(17.0)	(39.0)	(61.0)	(78.0)	(91.0)
Directive Adjustment²	(0.3)	(0.3)	(0.4)	(0.4)	(0.4)
Total	1,192.2	1,317.7	1,369.6	1,369.6	1,369.6
System OM&A^{3,4}	375.8	*	*	N/A	N/A

² The Directive Adjustment reflects the impact of the directive issued by Ontario's Management Board of Cabinet on February 21, 2019 and the associated compensation framework they approved on March 7, 2019. Refer to Exhibit F, Tab 4, Schedule 1 for further details.

³ System OM&A includes Operations, Maintenance and Administration expenses. System OM&A for 2021 to 2022 is determined based on the escalation factor identified in Exhibit A, Tab 4, Schedule 1

⁴ Includes the Directive Adjustment described in Exhibit F, Tab 1, Schedule 1.

Witness: Donna Jablonsky/Robert Reinmuller/Rob Berardi/Lincoln Frost-Hunt

TAB 3

VECC INTERROGATORY #12

Reference:

C-02-01

Interrogatory:

- a) Please provide a summary of Table 1 (In-Service Capital Additions 2014-2022) which shows the period totals for plan and actuals for each capital category and also includes the total capital contributions planned and actual. Please also provide the percentage of capital contributions attributable to the different capital categories (System Access/System Renewal/System Service/General Plant)

Response:

- a) Please note that capital contributions from other market participants are excluded from Hydro One's net capital expenditure and in-service additions, and Hydro One does not seek recovery of these costs in either historic or test years. This information is not relevant to Hydro One's historic performance nor the proposed revenue requirement for the test years.

The capital contributions attributable to the different capital categories for each of the test years are included in Exhibit B, Tab 1, Schedule 1, Section 3.3, Tables 5-8. These are summarized and also expressed as percentages below.

Table 1 - 2020-2022 Test Year Capital contributions (in \$ millions)

	2020		2021		2022	
	\$	%	\$	%	\$	%
System Access	130.9	78	46.7	57	51.3	75
System Renewal	3.8	2	6.1	7	8.3	12
System Service	34.2	20	29.7	36	8.5	13
General Plant	0	0	0		0	0
Total	168.9		82.5		68.1	

TAB 4

1

Table 1 - Productivity Savings Forecast Summary (\$Millions)

\$mm	2020	2021	2022	2023	2024	Total
Operations	47	52	53	53	54	259
Progressive Operations (Defined Capital)	6	12	12	10	10	49
Corporate	12	11	9	7	6	45
Capital Total	\$65	\$74	\$73	\$70	\$70	\$353
Operations	9	10	9	9	9	45
Information Technology	6	9	10	10	10	44
Corporate	7	6	5	4	3	25
OM&A Total	\$22	\$25	\$23	\$23	\$22	\$114
Total Defined	\$87	\$99	\$97	\$93	\$92	\$468
Progressive Operations (Undefined Capital)	11	27	49	68	81	237
Grand Total	\$98	\$126	\$146	\$161	\$173	\$704
Progressive Productivity						
Progressive Operations (Defined Capital)	6	12	12	10	10	49
Progressive Operations (Undefined Capital)	11	27	49	68	81	237
Progressive Productivity Placeholder	17	39	61	78	91	286

2 As noted in the table above, Hydro One has identified savings opportunities totalling
3 approximately \$704M over the 2020-2024 TSP period. This reflects Tier 1 Productivity
4 savings only. There are \$353M in capital productivity savings, \$114M in OM&A
5 productivity savings and \$237M in undefined capital savings. This latter category of
6 savings falls within “Progressive Productivity”. Progressive Productivity is a further
7 reduction in cost that Hydro One has included in the final Transmission Business Plan in
8 response to concerns that were raised in the OEB’s decision in the Prior Proceeding
9 regarding the level of investment. It represents a commitment from Hydro One to find
10 further efficiencies over the planning period when executing the necessary planned

Witness: Joel Jodoin, Andrew Spencer

TAB 5

AMPCO INTERROGATORY #83

Reference:

F-04-01

Interrogatory:

Hydro One provides the 2019 Team Scorecard.

Please provide the Team Scorecards for the years 2014 to 2018.

Response:

Please see Attachment 1 for 2015-2016 team scorecards.

Please see Attachment 2 for 2017 team scorecard.

Please see Attachment 3 for 2018 team scorecard.

Executive Summary

2016 Team Scorecard					
	Weight	Threshold	Target	Maximum	Description
Net Income	50%	582.2	685.0	736.0	\$M
Customer Sat.	20%	74%	75%	80%	% Customer Satisfaction
Work Program	20%	97%	101%	106%	% Work Program Complete
Safety*	10%	1.7	1.6	1.5	Recordable Rate per 200,000 Hrs.
* If the company has a fatality, the attained Safety measure will be reduced by 50% based on the findings of the System Investigation					

The 2016 Team Scorecard is developed to provide feedback that helps ensure the Company remains on track to achieving its Strategic Objectives.

The Team Scorecard is made up of four weighted measures (with a minimum of 10% given to any one measure) with the majority weighting on the financial measure.

The 2016 Team Scorecard is a key input into 2016 Management Compensation, specifically the Short Term Incentive Plan (STIP) Fund, as it relates to overall corporate performance in 2016.

Each Scorecard measure includes performance expectations expressed as Threshold/Target/Maximum to provide clear expectations at the Company level that can be translated into personal expectations for achievement.

Team Performance, expressed by the Team Scorecard, plays an increasingly larger role in Management Compensation based on level.

Rank	Team Weighting	Individual Weighting
Sr. Exec. (1-2)	80%	20%
Exec. (3-4)	80%	20%
Director (5)	70%	30%
Mgmt./Prof. (6-7)	70%	30%
Support (8-10)	50%	50%

The combination of these four performance measures are expected to drive the following behaviours:

1. A focus on finding ways to maximize net earnings without compromising work program delivery.
2. Focusing the organization on achieving activities that are meaningful and impactful to customers, in addition to continuing the focus on ensuring positive transactional outcomes.
3. Making it clear to the organization that an appropriate balance between satisfying all stakeholders, including ratepayers, shareholders and customers is the path to maximizing value.
4. Reinforcing the continuing importance of safety to the organization.

NOTE: This metric has a modifier attached to it, which will require that, in the case of a fatal incident, the overall safety measure will be reduced by 50%. This appropriately demonstrates a fatality on our watch is unacceptable and must be heavily weighted.

Team Scorecard

2017 Team Scorecard

Corporate Goal	Component Weight	Definition	Measure	Sub Component Weight	2017 Performance Levels		
					Threshold	Budget	Maximum
Health and Safety *	10%	Recordable Incidents	Incidents per 200,000 hours	100%	1.6	1.1	1.0
Work Program	25%	Reliability – Tx (SAIDI) average length of unplanned interruptions to multi-circuit supplied delivery points	Minutes per Delivery Point	25%	10.0	9.6	9.2
		Reliability -Dx (SAIDI) average length of outages in hours that a customer experiences	Hours per Customer	25%	7.8	7.5	7.2
		Tx In Service Additions Delivery Accuracy	Variance (%) to approved budget of \$931M (Tx Application)	25%	+/- 7%	+/- 5%	+/- 2%
		Dx In Service Additions Delivery Accuracy	Variance (%) to approved budget of \$663M	25%	+/- 6%	+/- 4%	+/- 2%
Net Income	30%	Net Income to Common Shareholders	\$M	100%	Note 1	Note 1	Note 1
Productivity	10%	Productivity Savings (Capital and OM&A)	\$	100%	\$64.3 (-10%)	\$70.7	\$77.7 (+10%)
Customer	25%	Dx Satisfaction - Improve overall Small and Residential Dx customer satisfaction	Customer Satisfaction	50%	70%	72%	75%
		Tx Satisfaction - Improve overall Large Tx customer satisfaction	Customer Satisfaction	50%	80%	82%	85%

* If the company has a fatality, the attained Safety measure will be reduced by 50% based on the findings of the System Investigation
Note 1: As we are a public company, we cannot communicate full year net income budgets widely

2018 Team Scorecard

Corporate Goal	Component Weight	Definition	Measure	Sub Component Weight	Performance Levels		
					Threshold	Budget	Maximum
Health and Safety *	10%	Recordable Incidents	Incidents per 200,000 hours	100%	1.3	1.1	1.0
Work Program	25%	Transmissions (Tx) Reliability – average length of unplanned interruptions to multi-circuit supplied delivery points (SAIDI)	Minutes per Delivery Point	25%	9.2	7.6	5.4
		Distribution (Dx) Reliability – average length of outages in hours that a customer experiences (SAIDI)	Hours per Customer	25%	7.5	7.0	6.8
		Tx In Service Additions - Delivery Accuracy	Variance (%) to approved budget of \$1,174M (Tx following OEB decision)	25%	+/- 6%	+/- 4%	+/-1%
		Dx In Service Additions - Delivery Accuracy	Variance (%) to approved budget of \$641M (Dx Application)	25%	+/- 5%	+/- 3%	+/-1%
Net Income	30%	Net Income to Common Shareholders	\$M	100%	redacted	redacted	redacted
Productivity	10%	Savings in \$M	\$M	100%	\$103.1	\$114.5	\$140.0
Customer	25%	Residential and Small Business customer satisfaction	Customer Satisfaction	50%	71%	73%	76%
		Tx (including Dx connected LDCs) customer satisfaction	Customer Satisfaction	50%	84%	86%	90%

* If the company has a fatality, the attained Safety measure will be reduced by 50% based on the findings of the System Investigation

TAB 6

Asset Condition / Demographics

Hydro One has approximately 7,000 vehicles and other fleet equipment. Table 26 shows the breakdown of the Fleet asset demographics and their current condition. Fleet Management Services and the LOB complete annual asset reviews. Assets are identified for replacement based on their ESL and mileage which are recommended by the manufacturers as a guideline to initially identify vehicles for replacement. Specialized technicians will assess the condition of the asset to determine if the asset can be retained for an additional period of time or if it needs to be replaced.

Table 26 - Average Age and ESL of TWE¹

Equipment Type	Quantity of TWE Fleet (%)	Average Age (Years)	Average Mileage (kms)	ESL (Years)	ESL (kms)
Light	37.8%	4	108,000	6	180,000
Heavy	19.5%	7	127,000	8-14	300,000-400,000
Off-Road	6.6%	8	N/A	individual asset assessment	
Miscellaneous	36.1%	8	N/A	individual asset assessment	
Helicopters	0.1%	15	N/A	individual asset assessment	

¹ Data from December 31, 2018

Condition

Hydro One specialized technicians monitor and assess the condition of the transport and work equipment during inspections and routine maintenance. Adequate maintenance and service intervals help to reduce degradation of the equipment and maximize the life of the asset. The condition of the assets, along with the age and kilometres driven/hours used, determine the need for replacement and any risks that need to be mitigated.

Future Outlook / Need

Fleet requirements for asset replacement are primarily based on industry standards or manufacturers' recommendations for life cycle expectancy. This includes age and kilometres driven as well as the overall condition of the asset. The objective is optimal

Witness: Donna Jablonsky, Lincoln Frost-Hunt, Rob Berardi



TAB 7



**Ontario Energy Board
Commission de l'énergie de l'Ontario**

DECISION AND ORDER

EB-2016-0160

HYDRO ONE NETWORKS INC.

Application for electricity transmission revenue requirement and related changes to the Uniform Transmission Rates beginning January 1, 2017 and January 1, 2018

BEFORE: Ken Quesnelle
Vice Chair and Presiding Member

Emad Elsayed
Member

Peter C. P. Thompson, Q.C.
Member

September 28, 2017

reductions in the capital budgets. The suggested reductions ranged from \$273 million to \$398 million over the two test years.

Hydro One's proposed capital expenditures have increased significantly over historical expenditures and are forecast to continue increasing, as shown in Table 4-1.

Development capital expenditure increases in the test years are due to major inter-area network projects, such as the Supply to Essex County Transmission Reinforcement and the capacity increase at Lisgar TS.³⁶

Operations capital expenditures have increased significantly due primarily to the need for a new back-up control centre and also the replacement of end-of-life grid control assets.³⁷

Common Corporate Capital expenditures have increased over historical expenditures due to information technology development projects, increased facility needs for sustainment, development and operations programs, and the purchase of a new helicopter.³⁸

Table 4-1
Transmission Capital Expenditures, 2012 – 2021
\$ million

Investment Category	4 year Historical Actual Expenditures				Bridge Year 2016	Test Year 1 2017	Test Year 2 2018	Forecast Expenditures		
	2012	2013	2014	2015				2019	2021	2022
Sustaining	\$ 389.3	\$ 480.0	\$ 621.3	\$ 694.3	\$ 724.3	\$ 776.8	\$ 842.1	\$ 825.7	\$ 915.2	\$ 1,118.1
Development	\$ 329.4	\$ 171.7	\$ 131.6	\$ 166.0	\$ 166.0	\$ 196.4	\$ 170.2	\$ 244.0	\$ 254.0	\$ 258.3
Operations	\$ 15.2	\$ 17.7	\$ 28.4	\$ 15.6	\$ 30.1	\$ 25.4	\$ 30.8	\$ 58.8	\$ 21.1	\$ 24.7
Common Corporate Costs	\$ 42.1	\$ 49.1	\$ 63.4	\$ 67.1	\$ 83.5	\$ 77.6	\$ 79.1	\$ 79.1	\$ 78.2	\$ 73.8
Total	\$ 776.0	\$ 718.5	\$ 844.7	\$ 943.0	\$1,003.9	\$1,076.2	\$1,122.2	\$1,207.6	\$1,268.5	\$ 1,474.9

Source: Exhibit B1/Tab3/Schedule 1/p.1

³⁶ Exhibit B1-3-1, pp. 4-5

³⁷ Exhibit B1-3-1, p. 5

³⁸ Exhibit B1-3-1, p. 5

However, the OEB believes that the pace of the program, which was not addressed in the EPRI report, may require further review relative to other sustaining investment priorities.

- The OEB also finds that the proposed stations investments, which represent the majority of the proposed Sustaining capital spending in both 2017 and 2018, have not been fully supported. The OEB agrees with some of the submissions that some of the stations work can be deferred without much impact on reliability or concern over coordination with nuclear outages. An independent third-party review of Hydro One's planning process, as suggested in the Planning section, may help Hydro One identify areas where its asset condition and work prioritization processes can be improved.
- As described in the Customer Engagement and Reliability Risk Model section above, the OEB does not have complete confidence in the process that Hydro One followed and, therefore, will not rely on the outcome reported by Hydro One as compelling evidence of customer support for the proposed level of capital expenditures.
- As described in the Planning section, the OEB has concerns about Hydro One's ability to complete the proposed capital investment program based on its historical performance, both in terms of capital spending and in-service additions.
- As mentioned in the Benchmarking section below, the results of the study commissioned by Hydro One don't seem to support Hydro One's proposal for a significant increasing trend in Sustaining capital in future years relative to actual historic expenditures.

The OEB approves a capital envelope of \$950 million for 2017 and \$1,000 million in 2018. This is a reduction of \$126.1 million in 2017 and \$122.2 million in 2018. The approved envelope is consistent with Hydro One's actual capital expenditure for 2015 (\$943 million) and its forecast for 2016 (\$1,004 million) and is significantly higher than the actual capital expenditure for the three previous years (\$776.0 million in 2012, \$718.5 million in 2013, and \$844.7 million in 2014).

On the one hand, these approved envelopes recognize the fact that additional expenditures are required in the test period relative to the 2012 to 2014 period to deal with issues that have not been properly addressed in a timely manner (e.g. insulators). On the other hand, as described earlier, the proposed increase in 2017 and 2018 relative to 2015 and 2016 has not been justified and has therefore been reduced.

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BY COURIER

October 18, 2017

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-2016-0160 - Hydro One Networks' 2017-2018 Transmission Revenue Requirement & Charge Determinants & EB-2017-0280 - Uniform Transmission 2017 Rates -
Reply Submission**

On October 10, 2017, Hydro One Networks Inc. ("**Hydro One**") filed a draft revenue requirement/charge determinant order and draft UTR order with supporting schedules (collectively, the "**DRO**") and additional tax-related information pursuant to the OEB's decision in the above-noted proceeding (the "**Decision**").

By October 16, 2017, submissions on the DRO were filed with the OEB by Canadian Niagara Power Inc. ("**CNPI**"), Schools Energy Coalition ("**SEC**"), Association of Major Power Consumers in Ontario ("**AMPCO**"), London Property Management Association, Building Owners and Manufacturers' Association ("**BOMA**"), Consumers Council of Canada, Canadian Manufacturers and Exports, and OEB Staff.

The submissions focused on the following topics:

1. the appropriate figure to use for CNPI's 2017 revenue requirement in the DRO;
2. the changes in forecast capital spending and in-service additions over the 2017-2018 period and whether there was a sufficient explanation for them;
3. the income tax expense that should appropriately be reflected in the DRO; and
4. the calculation of the foregone transmission revenue amount.

Table 1: 2017-2018 Capital Forecast

	Test Years Evidence		Test Years Decision	
	2017	2018	2017	2018
Sustaining	776.8	842.1	744.7	795.4
Development	196.4	170.2	131.4	94.9
Operations	25.4	30.8	13.0	42.9
Common Corporate Cost Capital	77.6	79.1	60.9	66.8
Total	1,076.1	1,122.2	950.0	1,000.0

Reductions in Sustainment capital forecasts reflect slowed pacing of tower coatings and stations and lines investments. Reductions in the Development capital forecast were largely driven by changes in customer demand and project forecasts. (Hydro One developed the 2017-2018 capital forecast for its application in early 2016.) The Development projects most impacted are investments at Clarington TS, Lisgar TS, Runnymede TS and Hanmer TS.

Because Development capital and portions of Sustainment capital are demand-driven, Hydro One may see further changes in this forecast (increase or decrease) before the 2017-2018 rate term ends and will manage within the OEB-approved capital envelope accordingly.

b. 2017-2018 In-service Additions Forecast

Hydro One does not see the full impact of the capital reductions reflected in the 2017-2018 in-service additions forecast because (a) transmission capital projects are often multi-year projects and many of these in-service additions are the result of projects initiated in earlier years, and (b) the Decision was issued just before the fourth quarter of 2017 and the cancellation of projects already well into execution is not a prudent or cost effective practice. The concerns raised by the parties' submissions do not take these considerations into account. Hydro One does not believe it is prudent to halt projects that are planned to be placed in-service in 2017, given that prior funding and expenditures have been committed and the underlying need for these investments has been established.

Both SEC and AMPCO have suggested that the in-service additions proposed by Hydro One in its DRO are contrary to the evidence of the proceeding and have both proposed implementing an overall capital spending to in-service ratio to Hydro One's test year capital expenditure for the purposes of setting rates. Hydro One does not apply one ratio to overall capital spending when

determining in-service additions. As evidenced in the proceeding,¹ Hydro One uses in-service addition ratios for capital programs based on historical trends. The in-service additions for capital projects are forecasted based on the projected in-service dates and based on total net costs. The approach recommended by SEC and AMPCO is an overly simplistic and incorrect way to determine in-service additions, especially when attempting to apply cuts to capital spending for work already in execution. It does not align with the reality of operating a business with multi-year construction projects. There is no evidentiary basis to support this approach, and it should be disregarded altogether.

To the extent that actual in-service additions are lower than forecast, the asymmetrical in-service variance account protects ratepayers against the risk of over-collecting related costs.

Several submissions sought more detail supporting the adjusted 2017-2018 capital and in-service additions forecasts in the DRO. At this time, Hydro One is not in a position to provide granular detail on the specific projects and programs in locations across the system that will be impacted by the reductions and to what degree. In Attachment 2 to this Reply, Hydro One has reflected the forecasted 2017-2018 changes in Sustainment, Development, Operating, and Common Corporate capital spending at the subcategory level (consistent with Exhibit B1-3-1 Attachment 1). Actual impacts managed at the project and program level may vary significantly. At the subcategory level of investment, however, Hydro One expects the changes to be smaller. In Attachment 3 to this Reply, Hydro One has also provided updated Exhibits D2-1-1, D2-3-1, D2-3-2 and D2-3-3, reflecting the impact of the Decision to rate base and depreciation, as request by OEB Staff.

Hydro One intends to file its next transmission application in the first half of 2018. As per the Decision, Hydro One will file a report detailing the execution of its “OEB-approved” 2017-2018 capital plan (both capital spending and in-service additions) at the program level, showing the status of each project with variance explanations on scope, cost or schedule for investments with total budgeted costs greater than \$3 million.

¹ Exhibit K.10.2 (Cross-examination Compendium of the School Energy Coalition - Finance Panel), pp.3-4, indicates that in-service dates are used to determine when a project investment is in-serviced while ratios are used to determine when program investments are in-serviced.