Building Owners and Managers Association Toronto Interrogatory # 34

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-03-01-01 Page: 22

Interrogatory:

Is there a final version of the Productivity and Outcome Measure Scorecard relative to the current forecast? Please file it.

Response:

Please refer to Exhibit I-18-SEC-29.

Building Owners and Managers Association Toronto Interrogatory # 71

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-05-01

Interrogatory:

a) No longer using the six.

b) Please provide the 2016 data for the two scorecards shown at pp 7 and 8. Please explain the difference in the two documents, for example, why do the returns on equity vary so much?

Response:

a) This interrogatory poses no question.

b) Please refer to Exhibit I-18-SEC-29 for 2016 data.

i. Figure 1 and Figure 2 in Exhibit A, Tab 5, Schedule 1 are identical. Figure 2 adds the orange column, titled Rate Application Five-Year Target to illustrate the 2022 targets for the measures.

ii. There is no difference between the measures or results between Figure 1 and Figure 2.

Building Owners and Managers Association Toronto Interrogatory # 80

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

2016 Sector-Wide Consolidated Scorecards of Electricity Distributors Page: 41

Interrogatory:

Please confirm that "target" in line 4 means "internal target".

Response:

In reference to Exhibit A, Tab 5, Schedule 1, p.41 of 52, line 4, Hydro One confirms that the reference is to an “internal target” for OM&A cost per customer.

Building Owners and Managers Association Toronto Interrogatory # 83

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-05-03 Customer Service Quality Performance Page: 6

Interrogatory:

Has the letter correcting the scorecard date referred to in Note 1 been filed? If so, please provide a copy.

Response:

Hydro One has not initiated the RRR Change Request process to restate this data. The data shown in Exhibit A, Tab 5, Schedule 3, Table 1 is correct as filed, and will be used to initiate the RRR Change Request Process.

Building Owners and Managers Association Toronto Interrogatory # 84

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-05-03 Page: 8

Interrogatory:

Where is Force Majeure event defined in relation to service quality performance indicators? Please provide HONI's definition.

Response:

Please refer to Exhibit I-9-BOMA-002 for the definition of Force Majeure.

All Hydro One Distribution customers interrupted throughout the duration of the event while normal restoration business processes are suspended, are counted in the determination of the numerator as the percent interrupted. The denominator is the total number of customers served at the end of the month when the force majeure occurred.

Consumers Council of Canada Interrogatory # 19

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-04-01

Interrogatory:

Please file copies of the following:

- The most recent Custom Satisfaction Transactional survey results (2016 and 2017)
- The most recent Customer Satisfaction Perception Surveys for retail and small business customers (2016 and 2017)
- Any recent reports related to the Customer Call Centre (2016 and 2017)
- Any recent reports related to the Customer Relationship Centre (2016 and 2017)

Response:

- Please refer to Exhibit I-17-CCC-019, Attachment 1 and Exhibit I-16-BOMA-068.
- Customer Relationship Centre surveys were not conducted in 2016.

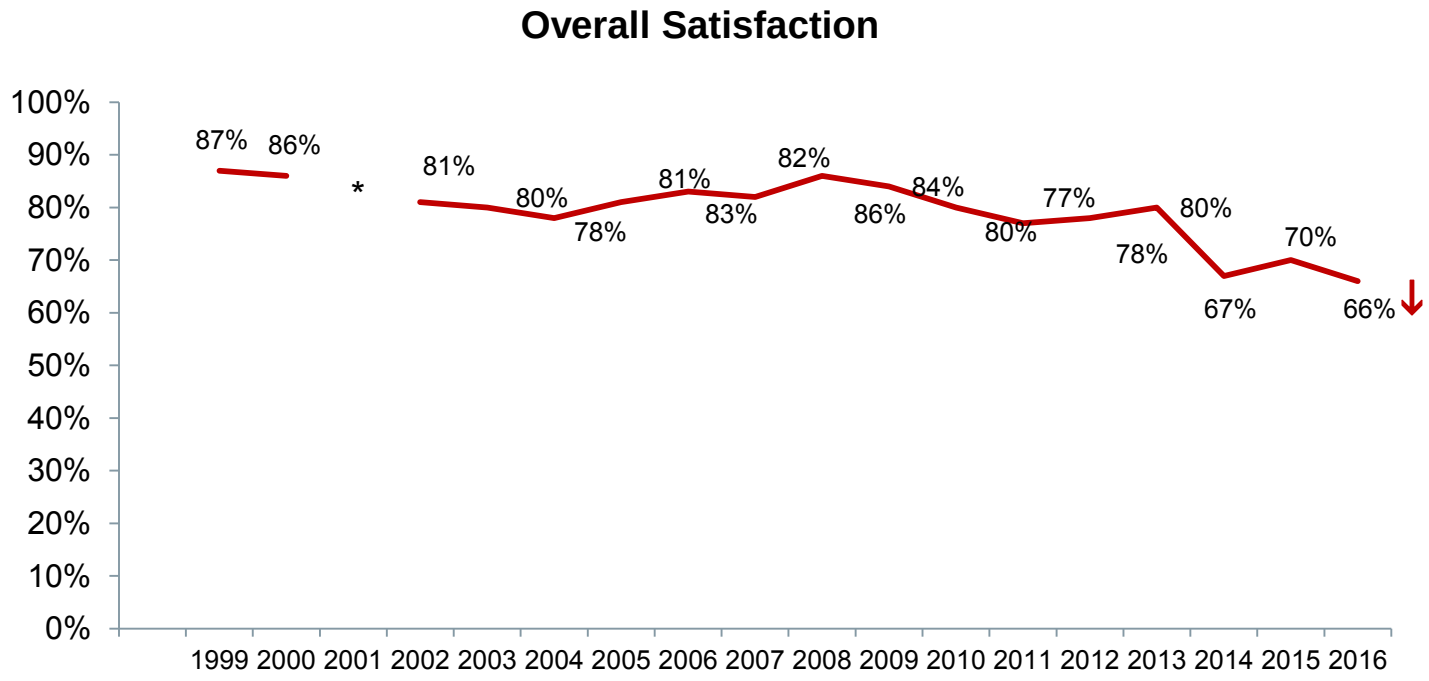
Customer Experience

Residential and Small Business Customer Satisfaction Study

December 2016 (Revised February, 2017)

Prepared by: Ipsos

Overall Satisfaction – Survey Results



Key Insights

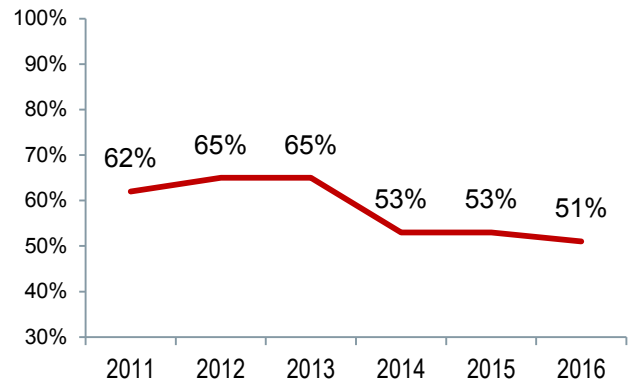
- *Overall Satisfaction is significantly lower in 2016 compared to 2015.*
- *Rates/Price continues to be the issue mentioned most often by those not satisfied overall with Hydro One. The incidence of mentions has increased significantly to 76% from the 61% found in 2015 – following a steep increase from 2014 to 2015.*

A1 (Q1b). How satisfied are you overall with Hydro One? (5 pt scale) Base: All respondents (n=2,410)
A2B (Q1b1). What issues were you thinking when you rated Hydro One overall satisfaction? (oe) Base: Those who are 'neutral, very or somewhat dissatisfied' in A1 (n=814)
*Study was not conducted in 2001

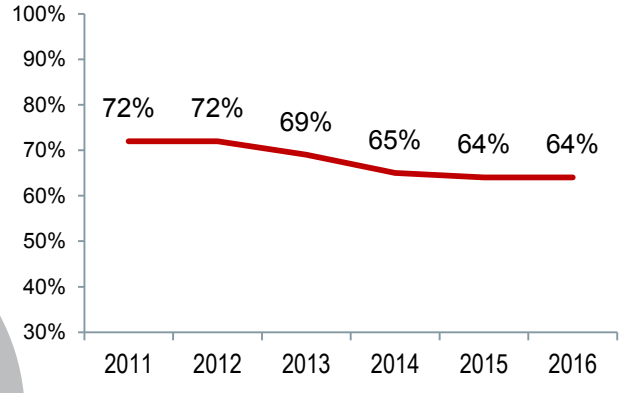
Survey Findings: Drivers of Satisfaction

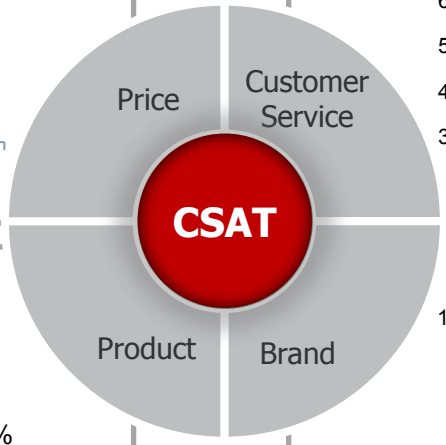
Despite significant changes in individual metrics in Brand and Price/Billing, the aggregate scores for all groups have remained stable compared to 2015.

Price/Billing Trend

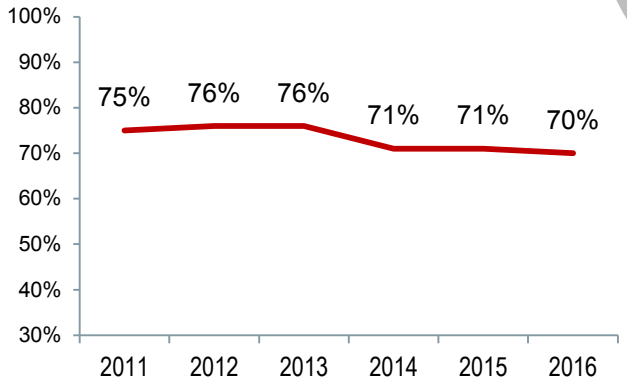


Customer Service Trend

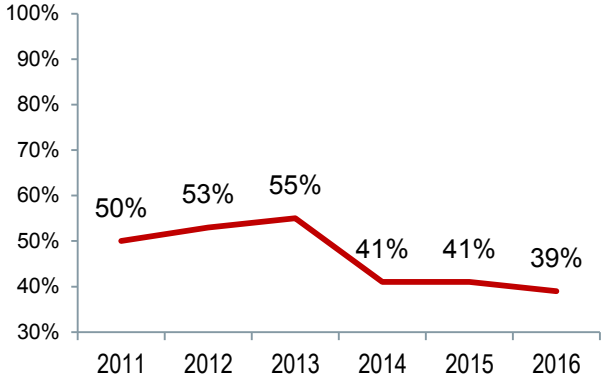




Product Quality/Reliability Trend



Brand Trend



Energy Probe Research Foundation Interrogatory # 13

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-03-02 Page: 10

Interrogatory:

a) How does Hydro One propose to verify in-service capital additions that result from productivity savings?

b) Will Hydro One provide evidence for all in-service addition variances that result from productivity savings as opposed to underspending for organizational reasons?

c) When will Hydro One provide that evidence? At the end of the term or annually?

Response:

a) The methodology used to track and verify savings for capital programs is described in Hydro One's response to Exhibit I-25-Staff-123.

b) Hydro One has established a detailed process to track productivity savings which is described in Exhibit I-25-Staff-123, response b). The savings are measured against the established budget at a unit level (to actual completed units). The established process for calculating and measuring savings would not result in productivity savings due to underspend or to cost avoidance.

For clarity, Hydro One has provided some illustrative calculations below.

PLAN ASSUMPTION
Baseline Cost per Unit: $100
Budgeted Cost per Unit: $80
Budgeted Units: 10
Embedded Productivity Savings: (100-80)*10 = $200

TRACKING ACTUALS

If Hydro One completes 8 units at a cost of $92 per unit:
Productivity Savings: (100-92)*8= $64
In this scenario Hydro One would report Actual Savings of $64 against a budget of $200 which represents a shortfall of $136

If Hydro One completed 8 units at a cost of $80 per unit:
Productivity Savings: (100-80)*8=$160
In this scenario Hydro One would report Actual Savings of $160 against a budget of $200 which represents a shortfall of $40

If Hydro One completed 10 units at a cost of $80 per unit:
Productivity Savings: (100-80)*10=$200
In this scenario Hydro One would report Actual savings of $200 against a budget of $200 which represents the amount of savings embedded into the business plan.

If Hydro One completed 8 units at a cost of $60 per unit:
Productivity Savings: (100-60)*8=$320
In this scenario Hydro One would report Actual Savings of $320 against a budget of $200 which represents excess savings of $120

c) Hydro One will provide details in support of any verifiable productivity savings related to the in-service variance account when it applies to clear balances at its next rebasing application.

Energy Probe Research Foundation Interrogatory # 14

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-03-01 Page: 8

Interrogatory:

Please explain the reasoning that Hydro One used in its proposal that the capital-in-service variance account track the cumulative difference over the Term between actual in-service and OEB approved capital additions for any in-service additions that are 98% or lower than the OEB approved level. Specifically why was the 98% level selected?

Response:

Hydro One believes that a dead band is appropriate for the capital in-service variance account in order to ensure alignment between the behaviours that are incented by the account and the outcomes that rate payers value. The in-service variance account should incent Hydro One to cost-effectively deliver on its plans in a timely fashion while providing rate payers with protection from over-paying in the instance that Hydro One does not substantially deliver on its proposed in-service targets.

Absent the 2% dead band, Hydro One is incented to fully spend 100% of its planned capital amounts and focus on identifying any additional productivity initiatives on OM&A programs where part of the savings can be kept by the distributor. Additionally, Hydro One is incented to do whatever it can (e.g. pay for additional overtime) to ensure planned projects are in-serviced by December 31st of each year rather than minimizing the execution cost. Though customers are not materially impacted if a project is in-serviced on December 31st as opposed to January 3rd, Hydro One would be financially impacted.

By including the 2% dead band, Hydro One is incented to find ways to lower the cost of capital projects, as well as OM&A, while still affording the sharing of benefits of significant cost savings with customers. Additionally, the dead band removes the incentive to inefficiently execute projects near the end of the calendar year to avoid refunding funds to rate payers while

still maintaining the incentive for Hydro One to substantially deliver on its capital programs and projects.

The proposed 2% dead band was chosen because it has minimal impact on customers, while incenting behaviour that better aligns with the outcomes that rate payers value and is consistent with the OEB's outcomes-based approach under the Renewed Regulatory Framework.

Energy Probe Research Foundation Interrogatory # 15

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

C1-01-01 Page: 7

Interrogatory:

Please provide net bad debt levels from 2013 to 2017.

Response:

2014 to 2016 Net Bad Debt levels are provided in Exhibit C1, Tab 1, Schedule 5, Table 1. The 2013 Net Bad Debt level was $32.8 million, as provided in Exhibit C1, Tab 2, Schedule 5, Table 2 of Hydro One's last custom distribution application (EB-2013-0416).

Audited 2017 actuals are unavailable at the time of writing this response. Hydro One will provide audited 2017 actuals after they become available.

Ontario Sustainable Energy Association Interrogatory # 5

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-05-01 Page: 43

Preamble: "Hydro One will continue its efforts to meet the planned distributor targets through monthly monitoring and reporting efforts, performing transactional customer surveys, and regular monitoring and performance tracking of its CDM support vendors. The Company has planned for investments to implement a Dynamic Pricing Pilot which is a program offered by the Government to encourage energy conservation."

Interrogatory:

a) Does Hydro One have an annual target for energy savings to achieve its assigned 2020 target? If so, please state the annual targets for each year.

b) Hydro One states that in 2015, 17.27% of the 2020 target was achieved. Does Hydro One expect to see similar or lower savings in future years? Please provide anticipated and/or forecasted savings annually between 2017 and 2020.

c) Please provide further detail on how Hydro One plans to meet the remaining GWh targets.

d) Does Hydro One have any reports or findings from the transactional customer surveys? Please describe the information that is asked in these surveys.

e) Has Hydro One conducted any studies into the energy conservation results that may be achieved by the Dynamic Pricing Pilot? If so, please identify and provide.

Response:

a) Hydro One was assigned a target of 1,221 GWh of energy savings by 2020 by the Independent System Electricity Operator. Hydro One was not assigned an annual energy savings target.

b) Please refer to Exhibit I, Tab 18, SEC-29, Electricity Distributor Scorecard.

c) Hydro One expects to achieve the 2020 allocated target by continuing to deliver the programs that are included in the Conservation and Demand Management Plan.

d) Hydro One began conducting transactional surveys in 2017 for the Home Assistance Program, Small Business Lighting program, and the Retrofit Program. The surveys assessed overall satisfaction with the program and the customer's experience with each phase of the program.

e) Hydro One is currently sponsoring a study that is being conducted by McMaster University to quantify these results. A final report has not yet been published.

Ontario Sustainable Energy Association Interrogatory # 6

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

C1-01-05 Page: 11

Preamble: "Hydro One also provides conservation and demand management programs, which are aimed at reducing customers' individual consumption, providing opportunities to potentially lower a customer's bill, and reducing the overall consumption on the electricity grid…. In 2016, Hydro One also began offering a new customer service model. Customer Care representatives visited communities around the province and with customers face-to-face."

Interrogatory:

a) Please provide further details about Hydro One's conservation and demand management programs. What programs is Hydro One offering? Please provide the anticipated savings for each of reducing customers' individual consumption, providing opportunities to potentially lower a customer's bill, and reducing the overall consumption on the electricity grid.
b) How many FTEs are staffed and are assigned to Hydro One's conservation and demand management programs? What is Hydro One's staffing expenditure for conservation and demand management programs? Has Hydro One considered hiring more employees to facilitate conservation and demand management programs?
c) Has Hydro One's new customer service model resulted in reduced energy consumption? Please provide energy savings.
d) How many customers have signed up for CDM programs because of Hydro One's customer service model? What materials does Hydro One provide to the customers during these visits? Please provide a copy of the materials.

Response:

a) Hydro One's Conservation and Demand Management Plan describes the programs offered and the level of annual electricity savings anticipated from each program. In 2017, Hydro One achieved approximately 220 GWh in annual energy savings and reduced customer bills by about $47 million. Hydro One's CDM Plan is provided as Attachment 1.

b) The following table shows Hydro One's conservation and demand management staffing levels and costs in 2017. Almost 100% of costs were recoverable from the IESO. At this time, Hydro One is not planning a material adjustment to staffing levels.

2017 FTEs	**2017 Staffing Expenditure**
116	$15M

c) Hydro One's "Get Local" initiative focused on customer education, knowledge, and assistance across several areas of our business, including energy savings. Among the topics discussed with customers, energy conservation was common. However, the team did not specifically track energy savings following the Get Local education/support sessions.

d) Hydro One does not track the volume of CDM-specific programs that customers sign-up for following the "Get Local" education sessions.

The following CDM material is shared with customers at "Get Local" education sessions:

- Savings Coupon Booklets, which promote LED bulbs, dimmers/timers sensors, powerbars, programmable thermostats, etc.;
- Home Assistant Program requirements; and
- Deal Days, which promote energy efficient tools and rebates.

Filed: 2018-02-12
EB-2017-0049
Exhibit I-17-OSEA-6
Attachment 1
1 of 18

OVERVIEW OF CDM PLAN
This CDM Plan must be used by the LDC in submitting a CDM Plan to the IESO under the Energy Conservation Agreement between the LDC and the IESO The CDM Plan will consist of the information provided in this document and any additional information and supporting documents provided by the LDC to the IESO in support of this CDM Plan. Capitalized terms not otherwise defined herein have the meaning ascribed to them in the Energy Conservation Agreement as may be applicable.
Complete all fields within the CDM Plan that are applicable. Where additional space is required to complete a section of the CDM Plan, please append additional pages as required. The LDC should indicate that additional information has been attached in the related question field on the CDM Plan. Please refer to the CDM Plan Submission and Review Criteria Rules for further information.

A. General Information

1.

CDM Plan Submission Date: ***(DD-Mon-YYYY)***	28-Apr-2015
CDM Plan Version	6

2.

LDC INFORMATION										
	LDC 1	**LDC 2**	**LDC 3**	**LDC 4**	**LDC 5**	**LCD 6**	**LCD 7**	**LCD 8**	**LCD 9**	**LCD 10**
LDC Name:	Hydro One Networks Inc.	Festival Hydro Inc.								
Company Representative:										
Name:	Tom Semler	Ysni Semsedini								
Title:	Director and Conservation Officer	Chief Executive Officer								
Email Address:	Tom.Semler@Hydroone.com	ysemsedini@festivalhydro.com								
Phone Number (XXX-XXX-XXXX):	416-345-5843	519-271-4703								

3.

Primary Contact for CDM Plan	
Name:	Sahar Mishriki
LDC Name:	Hydro One Networks Inc.
Title:	Manager, Strategy & Conservation
Email Address:	Sahar.Mishriki@HydroOne.com
Phone Number (XXX-XXX-XXXX):	416-345-4324

Estimated Start Date of CDM Plan: ***(DD-Mon-YYYY)***	1-Apr-2015

LDC CONFIRMATION FOR CDM PLAN	
Each LDC to this CDM Plan has executed the Energy Conservation Agreement.	Yes
A completed Cost-Effectiveness Tool is attached and forms part of the CDM Plan.	Yes
A completed Achievable Potential Tool is attached and forms part of the CDM Plan.	Yes
All customer segments in each LDC's service area are served by the Programs set out in this CDM Plan.	Yes
The CDM Plan includes all electricity savings attributable to all Programs and pilot programs that have in-service dates between Jan 1, 2015 and December 31, 2020.	Yes
The CDM Plan Budget for each LDC includes all eligible funding under the full cost recovery and pay-for-performance mechanisms for Programs under its CDM Plan.	Yes
Frequency of LDC Invoicing to IESO (subsequent changes to the frequency should be notified to us by email).	Monthly

COMPLETE FOR CDM PLAN AMENDMENTS ONLY		
Select the reason(s) for CDM Plan amendment, as per ECA.		
	One time each calendar year of the term	
	LDC wishes to request an adjustment to the CDM Plan Budget	
	The amendments to a provision of the ECA or any Rules will have a material effect on the CDM Plan	
	LDC's actual spending under CDM Plan has exceeded (or is reasonably expected to exceed) the portion of the CDM Plan Budget allocated to the current year of the term	Yes
	Under a joint CDM Plan, LDCs that are parties to a joint CDM Plan reallocate any portion of their respective CDM Plan Targets and CDM Plan Budgets [*Reallocation not subject to IESO approval*]	
	IESO has triggered remedies under Article 5 of the ECA	
	LDC seeking to change its selection of the type of funding that it wishes to receive for each Program in the CDM Plan [ECA, section 4.1]	
	Other (Please specify reason)	

B. LDC Authorization

LDC DECLARATION
Please complete the declaration for each LDC that is listed in this CDM Plan. A separate page with each LDC's signed declaration should be included as part of the CDM Plan submission.

LDC	
I represent that the information contained in this CDM Plan as it relates to the LDC is complete, true, and accurate in all respects. I acknowledge and agree to the following terms and conditions: (1) if this CDM Plan is approved by the IESO and accepted by each LDC to this CDM Plan, the CDM Plan together with any conditions to that approval is incorporated by reference into the Energy Conservation Agreement between the LDC and the IESO (2) the LDC will offer the Programs set out in Table 2 of this CDM Plan to customers in its service area; and (3) the LDC of will implement this CDM Plan in accordance with the CDM Plan Budget.	
LDC's Legal Name:	Hydro One Networks Inc.
Company Representative:	Tom Semler, Director and Conservation Officer
Signature	
	I/We have the authority to bind the Corporation.
Date (DD-Mon-YYYY)	

LDC's Legal Name:	Festival Hydro Inc.
Company Representative:	Ysni Semsedini
Signature	
	I/We have the authority to bind the Corporation.
Date (DD-Mon-YYYY)	

C. CDM Plan Summary

TABLE 1: SUMMARY OF CDM PORTFOLIO SAVINGS AND BUDGET

		CDM PLAN TOTAL	LDC 1	LDC 2	LDC 3	LDC 4	LDC 5	LCD 6	LCD 7	LCD 8	LCD 9	LCD 10
a.	**Allocated LDC CDM Plan Target (MWh)** *Indicate total CDM Plan Target allocated to LDC(s)*	**1,255,340**	1,220,690.0	34,650.0								
b.	**CDM Plan MWh Savings** *Calculated as part of CDM Plan*	**1,289,842**	1,255,125	34,717	0	0	0	0	0	0	0	0
c.	**Allocated LDC CDM Plan Budget ($)** *Indicate total budget allocated to LDC*	**$347,123,558**	$338,355,409.00	$8,768,149.00								
d.	**Total CDM Plan Budget ($)** *Calculated as part of CDM Plan*	**$347,080,757**	$338,317,197	8,763,560	0	0	0	0	0	0	0	0

f.	**CDM Plan Cost Effectiveness** *Indicate annual portfolio-level Cost Effectiveness for CDM Plan as determined by LDC(s) using output from Cost-Effectiveness Tool*		Total Resource Cost (TRC)			Program Administrator Cost (PAC)			Levelized Cost
		Program Year	**Benefits ($)**	**Costs ($)**	**Ratio**	**Benefits ($)**	**Costs ($)**	**Ratio**	**($/kWh)**
		2015	$158,512,039.87	$74,473,619.74	2.1	$140,366,536.18	$25,465,548.91	5.5	$0.033
		2016	$193,063,373.78	$123,709,290.23	1.6	$192,135,067.43	$45,159,417.99	4.3	$0.018
		2017	$150,461,533.17	$114,147,432.44	1.3	$148,801,770.36	$82,063,960.78	1.8	$0.046
		2018	$210,653,833.22	$136,851,765.85	1.5	$226,569,557.30	$81,849,075.16	2.8	$0.030
		2019	$134,479,903.68	$87,527,203.30	1.5	$142,796,002.37	$60,015,744.51	2.4	$0.039
		2020	$137,227,623.02	$82,074,895.89	1.7	$133,680,820.97	$56,406,219.28	2.4	$0.042
		CDM Plan Total	**$984,398,307**	**$618,784,207**	1.6	**$984,349,755**	**$350,959,967**	2.8	**$0.033**
g	**Plan Cost Effectiveness-Exceptions Rationale** *Complete this section if proposed plan does not meet minimum Cost-Effectiveness Thresholds set out in CDM Plan Submission and Review Criteria Rules.*								

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO could only be achieved with funding in addition to the CDM Plan Budget.

LDC 1:	Hydro One Networks Inc.

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)													
												2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small Business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs	Coupon Program			1-Jan-2016	Yes									$8,807,400	34,704.0	$22,978,655	37,596.0	$6,745,200	31,812.0	$6,536,600	31,812.0	$5,953,000	28,920.0	**$51,020,855**	**164,844.0**
	New Construction Program			1-Aug-2015	Yes									$690,000	919.6	$732,000	919.6	$734,000	919.6	$760,000	919.6	$788,000	919.6	**$3,704,000**	**4,598.0**
	Home Assistance Program			31-Oct-2015		Yes						$483,901	783.4	$4,075,000	2,353.2	$3,457,000	1,882.5	$3,496,000	1,882.5	$3,535,000	1,882.5	$3,517,000	1,882.5	**$18,563,901**	**10,666.8**
	Heating and Cooling Program			1-Jan-2016	Yes									$6,157,400	8,954.6	$7,430,400	9,507.8	$7,826,400	10,077.5	$8,222,400	10,647.3	$8,618,400	11,217.0	**$38,255,000**	**50,404.2**
	Small Business Lighting			1-Jan-2016			Yes		Yes					$1,499,355	2,805.2	$4,338,580	10,567.4	$3,625,989	8,261.1	$2,777,799	5,344.7	$2,562,181	4,822.6	**$14,803,904**	**31,801.0**
	Retrofit			1-Jul-2015			Yes	Yes	Yes	Yes	Yes	$1,037,539	2,200.4	$12,098,206	139,846.9	$13,138,215	42,785.2	$8,250,898	31,575.2	$8,375,367	31,441.5	$9,119,927	37,927.7	**$52,020,152**	**306,934.2**
	Audit Funding Program			1-Jul-2015			Yes	Yes	Yes	Yes	Yes	$23,067	0.0	$161,802	430.0	$163,040	430.0	$157,340	430.0	$157,340	430.0	$152,340	430.0	**$814,929**	**1,720.0**
	Process and Systems Upgrades Program			1-Jul-2015					Yes	Yes	Yes			$1,632,545	42,393.1	$13,336,980	46,382.5	$31,290,512	144,488.7	$10,089,748	39,353.8	$7,902,368	25,679.8	**$64,252,153**	**298,298.0**
	High Performance New Construction			1-Jan-2016				Yes	Yes	Yes	Yes			$1,271,760	3,420.0	$1,368,120	3,990.0	$1,296,360	3,420.0	$1,182,360	3,420.0	$960,600	2,850.0	**$6,079,200**	**17,100.0**
	Energy Manager Program			1-Jul-2015						Yes	Yes			$951,300	5,216.4	$1,251,300	6,955.2	$1,251,300	6,955.2	$1,251,300	6,955.2	$1,245,600	6,955.2	**$5,950,800**	**33,037.2**
	Monitoring and Targeting Program			15-Feb-2017						Yes	Yes			$0	0.0	$187,000	1,160.0	$1	1.0	$1	1.0	$1	1.0	**$187,003**	**1,163.0**
	Existing Building Commissioning			15-Feb-2017			Yes	Yes		Yes						$1	1.0	$1	1.0	$1	1.0	$1	1.0	**$4**	**4.0**
	Business Refrigeration Incentive Program			1-Jul-2017			Yes	Yes								$145,936	372.5	$505,999	1,303.8	$505,999	1,303.8	$318,058	819.6	**$1,475,993**	**3,323.9**
		First Nation Conservation Program		1-Jan-2016	Yes	Yes	Yes							$2,846,400	1,533.8	$3,674,700	2,787.3	$2,743,300	1,600.4	$2,946,400	1,892.8	$2,963,800	1,667.9	**$15,174,600**	**9,482.1**
		Social Benchmarking Program		1-Dec-2015	Yes									$4,547,661	0.0	$4,249,962	25,781.5	$4,095,608	6,890.2	$4,062,906	6,897.1	$4,148,289	8,992.4	**$21,104,426**	**48,561.1**
			Low Income Heat Pump Program	1-Aug-2017		Yes										$3,122,610	1,092.7	$2,683,115	910.6	$2,557,715	910.6	$2,099,980	728.5	**$10,463,419**	**3,642.4**
			Whole Home Program	1-Jan-2018	Yes													$6,944,364	6,503.1	$7,374,430	7,685.5	$7,804,497	8,867.9	**$22,123,291**	**23,056.6**
		High Efficiency Agricultural Pumping Program		1-Mar-2017					Yes							$2,380,109	4,371.0	$2,135,789	5,847.4	$2,424,735	7,296.3	$2,442,934	7,296.3	**$9,383,568**	**24,811.0**
			Smart Thermostat Program	27-Feb-2017	Yes											$1,270,000	2,184.4	$1,340,000	2,184.4	$165,000	0.0	$165,000	0.0	**$2,940,000**	**4,368.8**
																									0.0
FCR TOTAL												**$1,544,506**	**2,983.8**	**$44,738,829**	**242,576.7**	**$83,224,607**	**198,766.7**	**$85,122,176**	**265,063.7**	**$62,925,102**	**158,194.8**	**$60,761,976**	**149,978.9**	**$338,317,197**	**1,037,816.2**
Pay for Performance Programs																									
P4P TOTAL												**$0**	**0.0**	**$0**	**0.0**	**$0**	**0.0**	**$0**	**0.0**	**$0**	**0.0**	**$0**	**0.0**	**$0**	**0.0**
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*	Conservation Instant Coupon Booklet												50,354.2												**50,354.2**
	Residential New Construction												380.6												**380.6**
	Low Income Home Assistance Program												2,286.9												**2,286.9**
	Heating and Cooling Initiative												8,722.6												**8,722.6**
	Direct Install Lighting												7,683.8												**7,683.8**
	Retrofit Initiative												114,185.8												**114,185.8**
	Audit Funding												0.0												**0.0**
	Process and Systems Upgrades Program												19,667.2												**19,667.2**
	High Performance New Construction												1,852.9												**1,852.9**
	Energy Manager (PSUI)												1,865.6												**1,865.6**
	Aboriginal Program												3,197.0												**3,197.0**
	Other												7,112.2												**7,112.2**
2011-2014 CDM Framework (and 2015 extension) TOTAL												**$0**	**217,308.9**											**0.0**	**217,308.9**
TARGET GAP TOTAL																								**0.0**	
CDM PLAN TOTAL												**$1,544,506**	**220,292.7**	**$44,738,829**	**242,576.7**	**$83,224,607**	**198,766.7**	**$85,122,176**	**265,063.7**	**$62,925,102**	**158,194.8**	**$60,761,976**	**149,978.9**	**$338,317,197**	**1,255,125.1**
MINIMUM ANNUAL SAVINGS CHECK													**True**		**True**		**True**		**True**		**True**		**True**		

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 2:	Festival Hydro Inc.

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Province Wide Program	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)													
												2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small Business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs	High Performance New Construction			1-Jan-2016				Yes		Yes	Yes			$30,999	57.0	$59,652	114.0	$36,928	57.0	$39,308	57.0	$37,649	57.0	$204,536	342.0
	Coupon Program			1-Jan-2016	Yes	Yes								$85,780	316.6	$61,213	159.7	$57,179	149.8	$54,188	133.2	$54,904	149.8	$313,264	909.2
	Heating and Cooling Program			1-Jan-2016	Yes	Yes								$117,925	31.2	$66,956	15.6	$49,864	10.6	$50,057	10.6	$48,727	10.6	$333,529	78.5
	Retrofit			1-Jan-2016			Yes	Yes	Yes	Yes				$673,010	2,521.5	$879,560	2,837.3	$907,676	2,973.9	$873,054	2,739.3	$764,319	2,127.2	$4,097,619	13,199
	Process and Systems Upgrades Program			1-Jan-2016				Yes		Yes	Yes			$96,133	2.0	$674,822	6,756.1	$637,968	2.0	$89,344	2.0	$40,565	2.0	$1,538,832	6,762.1
	Audit Funding Program			1-Jan-2016				Yes		Yes	Yes			$11,381	0.0	$27,871	151.7	$19,760	151.7	$14,622	75.9	$13,792	75.9	$87,426	455.1
	Small Business Lighting			1-Jan-2016			Yes		Yes					$284,381	1,406.6	$477,216	2,344.4	$236,610	1,125.3	$146,990	562.6	$49,231	140.7	$1,194,428	5,579.6
	Home Assistance Program			1-Jan-2016		Yes								$24,168	3.9	$43,385	15.7	$44,363	15.7	$44,699	15.7	$42,372	15.7	$198,987	66.7
	Business Refrigeration Incentive Program			1-Sep-2017			Yes	Yes						$0	0.0	$30,000	86.7	$119,605	312.0	$101,295	265.8	$84,465	219.6	$335,365	884
			Unassigned Target - Residential	1-Jan-2018	Yes									$0	0.0	$0	0.0	$93,266	300.1	$183,315	650.1	$182,982	650.1	$459,563	1,600
	New Construction Program			1-Sep-2017	Yes											$1	1.0	$1	1.0	$1	1.0	$1	1.0	$4	4.0
	Monitoring and Targeting Program			1-Jul-2017				Yes		Yes	Yes					$1	1.0	$1	1.0	$1	1.0	$1	1.0	$4	4.0
	Existing Building Commissioning			1-Jul-2017			Yes	Yes		Yes						$1	1.0	$1	1.0	$1	1.0	$1	1.0	$4	4.0
FCR TOTAL												$0	0.0	$1,323,777	4,338.8	$2,320,677	12,484.1	$2,203,221	5,101.0	$1,596,875	4,515.2	$1,319,010	3,451.4	$8,763,560	29,888.6
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*	Retrofit Initiative												3,940.7												3,939.7
	Direct Install Lighting												296.9												169.5
	Audit Funding												784.0												0.0
	Conservation Instant Coupon Booklet												502.5												495.1
	Low Income Home Assistance Program												24.6												17.1
	Heating and Cooling Initiative												206.7												206.7
	Appliance Retirement Initiative												45.9												0.0
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	5,801.2											0.0	4,828.1
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	5,801.2	$1,323,777	4,338.8	$2,320,677	12,484.1	$2,203,221	5,101.0	$1,596,875	4,515.2	$1,319,010	3,451.4	$8,763,560	34,716.8
MINIMUM ANNUAL SAVINGS CHECK													True		True		True		True		True		True		

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 3:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program: Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program): 2015 Anticipated Annual Budget ($)	2015 Energy Savings (MWh)	2016 Anticipated Annual Budget ($)	2016 Energy Savings (MWh)	2017 Anticipated Annual Budget ($)	2017 Energy Savings (MWh)	2018 Anticipated Annual Budget ($)	2018 Energy Savings (MWh)	2019 Anticipated Annual Budget ($)	2019 Energy Savings (MWh)	2020 Anticipated Annual Budget ($)	2020 Energy Savings (MWh)	Total 2015 - 2020: Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 4:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)													
												2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 5:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program) 2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 6:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 7:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)													
												2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 8:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 9:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

D. CDM Plan Detailed List of Programs, Election of Funding Mechanism, and Annual Milestones

NOTES	
1. CDM Plan	Complete Table 2 for all Programs for which will contribute towards the CDM Plan Target.
2. Program Name	Province-wide LDC Program names are found in the applicable Program Rules. Regional & local Program names should be consistent with those included in approved business cases (if applicable) and consistent throughout this CDM Plan.
3. Anticipated Annual Budget	Include annual budgets for each Program to be allocated against the CDM Plan Budget by funding mechanism. Note: LDC Eligible Expenses incurred in 2014 for programs delivered in 2015 (and not funded as part of the 2011-2014 Master CDM Program Agreement) should be included in 2015 Annual anticipated budget amounts.
4. Target Gap	Portion of the CDM Plan Target that the LDC reasonably expects, based on qualified independent third party analysis as accepted by the IESO, could only be achieved with funding in addition to the CDM Plan Budget.

LDC 10:	

TABLE 2. PROGRAM AND MILESTONE SCHEDULE

Funding Mechanism	Approved Province Wide Programs	Approved Local, Regional, or Pilot Programs	Proposed Pilots or Programs	Program Start Date (DD-Mon-YYYY)	Customer Segments Targeted by Program							Program Implementation Schedule (Annual Anticipated Budget & Incremental Annual Milestones by Program)													
												2015		2016		2017		2018		2019		2020		Total 2015 - 2020	
					Residential	Low-income	Small business	Commercial (inc. Multi-Fa	Agricultural	Institutional	Industrial	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Anticipated Annual Budget ($)	Energy Savings (MWh)	Total CDM Plan Budget ($)	Total Persisting Energy Savings in 2020 (MWh)
Full Cost Recovery Programs																									
FCR TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
Pay for Performance Programs																									
P4P TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
2011-2014 CDM Framework (and 2015 extension of 2011-2014 Master CDM Agreement) *(Not funded through 2015-2020 CDM Framework)*																									
2011-2014 CDM Framework (and 2015 extension) TOTAL												$0	0.0											0.0	0.0
TARGET GAP TOTAL																								0.0	
CDM PLAN TOTAL												$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0	$0	0.0
MINIMUM ANNUAL SAVINGS CHECK																									

E. Proposed Local and Regional Pilot CDM Programs

Notes
Complete the following Table(s) for each proposed local and regional Program or Pilot Program in the CDM Plan for which a business case has NOT previously been approved by the IESO. Please refer to the Program Development and Rule Revision Guideline and the Business Case Template for full details on requirements and submission of a business case for approval of a local or regional Program. For the process for receiving funding for a Pilot Program, refer to the LDC Program Innovation Guideline.

TABLE 3a. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**	Smart Thermostat Program	*Use same "Program name" included in other worksheets*	
b.	**Program Type**	Proposed Local Program		
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***	December 16. 2016		
c.	**Customer Segment(s) Served by Programs**	Residential		
d.	**Participating LDCs *(if applicable)***	Hydro One Networks Inc.		
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*	Hydro One will be implementing a Smarth Terhmostat Program in collaboration with Union Gas, Nest, and Ecobee. Eligible customers who purchase a Nest or ecobee3 thermostat from the vendors' websites will receive an instant online discount and pay $139 or $104 per thermostat respectively (approximately $190 off retail price). Additionally, Nest participants will be able to opt into the new Nest Time of Savings solution designed to shift consumption away from peak hours as much as possible.		

TABLE 3b. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**	Whole Home Program	*Use same "Program name" included in other worksheets*	
b.	**Program Type**	Proposed Regional Program		
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***	TBD		
c.	**Customer Segment(s) Served by Programs**	Residential		
d.	**Participating LDCs *(if applicable)***	Hydro One Networks Inc.		
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*	The proposed Whole Home Program would offer residential customers in home energy audits and incentives towards the installation of energy effient equipment and home upgrades. The final design of this program will rely on the results of the Provincial Whole Home Pilot.		

TABLE 3c. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**	Low Income Air Source Heat Pump Program	*Use same "Program name" included in other worksheets*	
b.	**Program Type**	Proposed Regional Program		
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***	31-Mar-2017		
c.	**Customer Segment(s) Served by Programs**	Low Income		
d.	**Participating LDCs *(if applicable)***	Hydro One Networks Inc.		
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*	The Low-Income Air Source Heat Pump (ASHP) Program will help Hydro One's low-income residential customers with electric space heating to reduce their electricity bills through the installation of ASHPs. Hydro One will reach out to customers that have qualified for the Home Assistance Program and have electric space heating. Participants in the program will receive a fully incentivized cold climate heat pump to replace or supplement their current electric heating systems.		

TABLE 3d. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

TABLE 3e. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

TABLE 3f. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS

a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

E. Proposed Local and Regional Pilot CDM Programs

Notes
Complete the following Table(s) for each proposed local and regional Program or Pilot Program in the CDM Plan for which a business case has NOT previously been approved by the IESO. Please refer to the Program Development and Rule Revision Guideline and the Business Case Template for full details on requirements and submission of a business case for approval of a local or regional Program. For the process for receiving funding for a Pilot Program, refer to the LDC Program Innovation Guideline.

TABLE 3g. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS				
a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

TABLE 3h. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS				
a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

TABLE 3i. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS				
a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

TABLE 3j. PROPOSED LOCAL AND REGIONAL CDM PROGRAMS / PILOTS				
a.	**Program Name**		*Use same "Program name" included in other worksheets*	
b.	**Program Type**			
b.	**Estimated Business Case Submission Date *(DD-Mon-YYYY)***			
c.	**Customer Segment(s) Served by Programs**			
d.	**Participating LDCs *(if applicable)***			
e.	**Overview of Proposed Program or Pilot** *Provide overview of key objectives and elements of proposed program or pilot.*			

F. Detailed Information on Collaboration and Regional Planning

ADDITIONAL DETAILED INFORMATION	
Regional LDC(s) Collaboration *Description of how the LDC(s) will collaborate with other LDCs. If collaboration will not occur, description of why it will not occur.*	Hydro One is currently participating in a number of subcommittees tasked with either the development of new initiatives or the refinement of existing programs. Hydro One is also planning collaboration with Niagara Peninsula Energy Inc in delivering the proposed Agricultrual High Efficiency Pumping Program. Festival Hydro Inc will be seeking out opportunities for LDC collaboration through our existing regional networks and industry committees/working groups such as the EDA, IESO/LDC working groups and the South Western Ontario Utility Group. All facets of collaboration will be considered including partnerships on program delivery.
Gas Collaboration *Description of how the LDC(s) will collaborate with other gas utility programs delivered in service area (if applicable). If collaboration will not occur, description of why it will not occur.*	Hydro One has held discussions with Natural Gas Companies to propose exploring possibilities to develop new programs aimed at both electricity and gas savings. The Aboriginal Working Group, in which Hydro One participates, is developing a plan to coordinate our energy conservation programs for First Nations communities with Union Gas. Hydro One will be collaborating with Union Gas for a proposed Smart Thermostat program. Festival Hydro Inc is open to collaboration opportunities with gas utility programs and hopes to utilize regional networking to investigate potential opportunities. Festival Hydro has met with local gas utility CDM staff to review program offerings. We are referring customers to each other's respective programs as applicable.
CDM Contribution to Regional Planning *Description of how the CDM Plan considers the electricity needs and investments identified in other plans or planned initiatives, completed or underway within the LDC(s)' service area or region. This may included Integrated Regional Resource Plans or Municipal Community Energy Plans.*	As per the CDM Requirement Guidelines for Electricity Distributers released by the Government on December 19, 2014, Hydro One's distribution planning will incorporate its CDM plans at the outset of the planning process. Thus, distribution investments to increase the system capacity will only be implemented as the regional solution where CDM is not a viable option. Hydro One is exploring a variety of program offerings that provide customer and electricity system benefits through energy efficiency, behavioural changes, load displacement, load shifting, demand response, and energy storage. Hydro One is willing to collaborate with local electricity utilities and gas utilities to develop programs and implement projects that will be cost-effective and benefit the greater electricity system. Over the course of the 2015-2020 Conservation Framework, Hydro One's Smart Grid initiative will be deploying a number of CDM pilots that will simultaneously help customers better manage their electricity bills and enable Hydro One to better control demand for operational and economic purposes. Through consumer research and load analytics, the Smart Grid initiative has identified two pilot streams, targeting central air conditioning and domestic water heating. Hydro One has piloted a Bring Your Own Thermostat initiative, enabling customers to participate in conservation and demand response (DR) by installing their preferred smart thermostat from amongst a list of pre-qualified models. Hydro One has also piloted a Smart Switch for electric water heaters, which allows customers to schedule their water heaters to avoid peak-time electricity usage and increase Hydro One's demand response capacity. These initiatives will increase Hydro One's DR capacity by maximizing opportunities for customers to participate in CDM programs that help to alleviate local system constraints. Hydro One will be taking part in many active and upcoming Integrated Regional Resource Planning (IRRP) processes. Hydro One is committed to supporting the implementation of the IRRP through delivery of this CDM Plan. Hydro One CDM staff supporting the development and implementation of the IRRPs include Hydro One's Manager of Business Integration & Conservation and Manager of Business Development Support. Festival Hydro Inc. will continue to consider the electricity needs and investments identified in other plans or planned initiatives completed or underway within our service area and region. FHI will continue to work to gain alignment between the CDM Plan and commitments required as part of the Integrated Regional Resource Plan (IRRP). FHI's Energy Conservation Officer will support the development of an IRRP.

G. Additional Documentation for CDM Plan (If applicable)

ADDITIONAL INFORMATION AND DOCUMENTATION	
Programs *Opportunity to provide any additional information on assumptions used for budgets and/or savings for approved 2015-2020 province-wide programs*	Hydro One's CDM Plan was prepared using program savings assumptions based on the best information available at the time of making this submission. Where Hydro One's historical savings differ from the IESO provincial archetypes or existing measures in the CE Tool, HONI developed its own historical archetypes. Hydro One Archetypes were created for the Audit Funding, Energy Manager, Retrofit, Process & Systems Upgrade, and its proposed programs. Program participation is based on historical levels with consideration of changes to marketing, deliver channels, and market saturation.
Approved Local and/or Regional Programs and Pilot Programs *Opportunity to provide any additional information on assumptions used for budgets and/or savings for approved 2015-2020 local or regional programs or pilot programs*	This information was provided in the program business cases submitted to the IESO. FHI will continue to pursue Local and/or Regional Programs and Pilot Programs through LDC collaboration.
Proposed Local and/or Regional Programs and Pilot Programs *Opportunity to provide additional information on assumptions used for forecast budgets and/or savings for proposed programs or pilot programs*	Hydro One has several programs that have recently been piloted, are planned for piloting and/or planned for program application. Additional details will be included in the program or pilot business cases. FHI will continue to pursue Local and/or Regional Programs and Pilot Programs through LDC collaboration.
Programs from 2011-2014/2015 CDM Framework *Opportunity to provide any additional information on assumptions used for budgets and/or savings from existing 2011-2014/2015 CDM Programs*	Savings from 2011-2014 Framework programs achieved in 2015 in this CDM Plan submission are as per the IESO's Final Verified Results Cost Effectiveness tool provided to LDCs in September 2016. Hydro One's 2015 results include the combined impact of 2015 results achieved by Hydro One, Norfolk Power Distribution, Haldimand County Hydro Inc., and Woodstock Hydro Services Inc. as all utilities have now been acquired by and amalgamated into Hydro One.
Programs funded through Pay-for-Performance *Opportunity to provide any additional information on assumptions used for budgets and/or savings for Pay for Performance Programs*	At this time, Hydro One is not submitting any programs under Pay-for-Performance (P4P). At this time, Festival Hydro is not submitting any programs under Pay-for-Performance (P4P).
Other *Additional assumptions used in the CDM Plan*	

Summary of Changes to CDM Template

Version No.	Date	Tab	Change Summary
1	20-Jan-15	A. General Information	Inclusion of "Company Name" for Primary Contact
			Inclusion of frequency of invoicing (monthly vs. quarterly)
			Update date format to eliminate confusion
			Change reference to OPA
			Additional LDCs for joint plan
		B. LDC Authorization	Update date format to eliminate confusion
		D. CDM Plan Milestone LDC 1-10	Additional line items for FRC program names
			Additional LDCs for joint plan
			Update on the program names
			Update date format to eliminate confusion
			Update column headers: - "Province Wide Program Name" - "Proposed Regional or Local CDM Program or Pilot Program Name"
			Change reference to OPA
			Update Header and Footer
		E.. Proposed Program&Pilots	Additional boxes for proposed programs
			Update date format to eliminate confusion
		C. Detailed Information	Clarity if it is primary LDC or all LDCs in a joint CDM Plan.

Ontario Sustainable Energy Association Interrogatory # 7

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

A-06-04-01 Page: 27

Preamble: In Hydro One's 2015 Annual Report, Hydro One states:

> *"In 2014, Hydro One Networks achieved 167.4 MW in peak demand savings and 898.4 GWh in energy savings, which represent 78.4% and 79.5% of its peak demand and energy reduction targets, respectively. Although Hydro One Networks did not meet its peak demand reduction target, no punitive action will be taken against the Company."*

Interrogatory:

a) Did Hydro One meet its peak demand reduction target in each year after 2014?

b) How will Hydro One ensure that it meets its peak demand reduction target going forward?

Response:

a) As of 2015, Hydro One is no longer required to meet a demand reduction target.

b) Hydro One does not currently have a peak demand reduction target.

Ontario Sustainable Energy Association Interrogatory # 8

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

B1-01-01 Section 1.4 Page: 27-30

Preamble:

Public Policy Responsiveness:		
RRF Outcomes	Hydro One Business Objectives	Performance Measures
Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board	Ensure compliance with all codes, standards, and regulations	Monitored by the applicable business unit(s)
	Partner in the economic success of Ontario	Monitored by the applicable business unit(s)
	Sustainably manage our environmental footprint	Net cumulative energy savings Renewable Generation Connection Impact Assessments completed on time New Micro-embedded facilities connected on time

Interrogatory:

a) Has Hydro One considered creating shareholder and public value in enhancing its strategic approach and pursuing more create objectives on a proactive basis using Triple Bottom line or similar approach? (Definition of triple bottom line: Financial, social, and environmental effects of a firm's policies and actions that determine its viability as a sustainable organization.)

Response:

a) Hydro One considered various methods to incorporate and reflect the four outcomes identified in the Rate Handbook, that align with achieving Hydro One Business Objectives and the four Renewed Regulatory Framework Performance Outcomes as described in Exhibit B1-1-1 DSP Section 1.1 and Exhibit B1-1-1, DSP Section 1.4 (5.2.3 A and B) Methods and Measures describe the process for selecting the metrics.

OEB Staff Interrogatory # 66

Issue:

Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and financial performance?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.1 (5.2.3 A and B) Methods and Measures, Table 8 – Distribution OEB Scorecard, Page 1918 of 2930.

Table 8 – Distribution OEB Scorecard

			Historical Results						Target	
RRF Outcomes		Measure	2011	2012	2013	2014	2015	2016	2017	2018
Customer Focus	Customer Satisfaction	Customer Satisfaction - Perception Survey %	77%	78%	80%	67%	70%	66%	72%	74%
		Handling of Unplanned Outages Satisfaction %	81%	79%	78%	75%	76%	75%	76%	77%
		Call Centre Customer Satisfaction %	85%	84%	82%	81%	85%	86%	86%	87%
		My Account Customer Satisfaction %	81%	84%	64%	75%	78%	79%	81%	83%
Operational Effectiveness	Cost Control	Pole Replacement - Gross Cost Per Unit in $	8,541	8,441	7,824	8,928	8,392	8,350	8,640	8,733
		Vegetation Management - Gross Cyclical Cost per km $			New Program				9,441	9,382
		Station Refurbishments - Gross Cost per MVA in $*	386,000	-	318,000	348,000	500,000	557,000	461,000	454,000
		OM&A dollars per customer	456	451	498	551	453	455	449	455
		OM&A dollars per km of line	4,723	4,676	5,109	5,654	4,719	4,773	4,700	4,758
	System Reliability	Number of Line Equipment Caused Interruptions	7,681	7,316	7,266	8,311	8,164	7,674	8,200	8,200
		Number of Vegetation Caused Interruptions	6,113	6,953	5,791	6,540	6,944	7,439	6,900	6,500
		Number of Substation Caused Interruptions	159	144	129	158	141	103	145	145
		SAIDI - Rural - duration in hours	8.2	8.2	8.1	8.6	9.1	9.1	9.1	9.0
		SAIFI - Rural - frequency of outages	3.3	3.3	3.0	3.4	3.4	3.1	3.4	3.4
		SAIDI - Urban - duration in hours	2.7	3.2	2.2	2.8	2.8	2.4	2.8	2.8
		SAIFI - Urban - frequency of outages	1.6	1.7	1.6	2.3	1.4	1.6	1.7	1.7
		Large Customer Interruption Frequency (LDA's) - frequency of outages		New Measure	135	197	228	136	143	143

*There were no station refurbishment units matching the criteria completed in 2012

Interrogatory:

a) Please explain the sustained drop in 'Customer Satisfaction – Perception Survey %' for each year starting 2014 to 2016. Is it due to factors outside of the control of Hydro One, such as weather-related outages?

b) In 2013, pole replacement costs are at their lowest point, SAIFI, SAIDI and other outage measures are relatively good, while the customer satisfaction measure is higher than other years. Has Hydro One analyzed the correlations between the metrics listed in the scorecard? If yes, which metric correlates best with higher customer satisfaction measures?

c) What are the most significant asset failure modes captured in the "Number of Line Equipment Caused Interruptions" category? What are the typical triggering causes of these failures (e.g.: high winds, snow load, extreme heat, spontaneous failure, etc.)?

Response:

a) Based on Hydro One's satisfaction surveys and research, the following issues resulted in the decline in customer satisfaction between 2014 and 2016: billing accuracy, lack of trust, rates charged, and fairness of charges. The Electricity Price Index increased substantially since 2013, resulting in a decline in customer satisfaction.

b) Quality and reliability are considered when measuring customer satisfaction with Hydro One. As an example, the Hydro One's Customer Engagement analyzed the correlation between outages and reliability with customer satisfaction (as per Exhibit B1, Tab 1, Schedule 1, Attachment 1).

c) Pole, conductor, insulator, switch failures are the most significant asset failures in terms of their contribution to SAIFI and SAIDI. The Hydro One database classifies all customer interruptions resulting from equipment failures as "Defective Equipment", regardless of the specific triggering causes of the failures. Therefore, the data set does not have the level of granularity to report the typical triggering causes of failure for the "Line Equipment Caused Interruptions".

Association of Major Power Consumers in Ontario Interrogatory # 3

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-05-01
Electricity Distributor Scorecard

Interrogatory:

a) Page 8 Figure 2: Please provide any changes to the Rate Application Five-Year Targets resulting from the release of the 2016 Electricity Distribution Scorecard and evidence updates.

b) Please provide any internal or consultant reports in the past 5 years related to the review of Hydro One's system reliability.

c) Page 33: Please provide copies of any reports resulting from Hydro One's participation in surveys or studies related to its system reliability in the past 5 years.

Response:

a) Refer to Interrogatory Exhibit I-18-SEC-029.

b) & c) Please refer to Exhibit I-3-SEC-003.

Energy Probe Research Foundation Interrogatory # 16

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-03-01 Page: 11

Interrogatory:

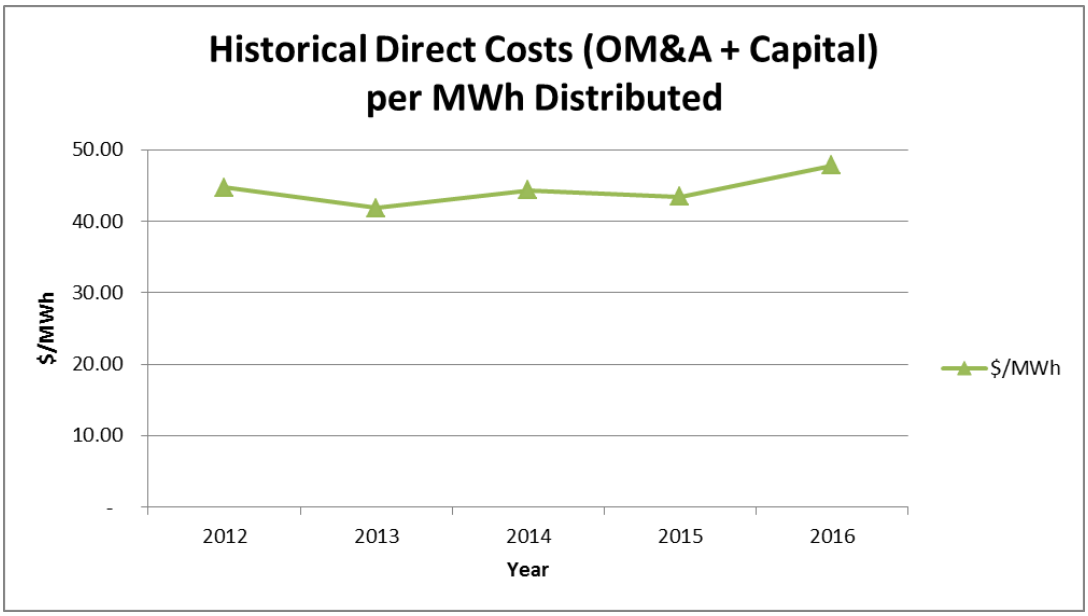
a) Why has Hydro One not considered a metric for cost per megawatt hour (MWh) delivered?

b) Can Hydro One provide that figure for 2010-2016?

Response:

a) Hydro One believes that a metric for cost per megawatt hour (MWh) is not appropriate as there is no direct relationship between short term variations in load and the costs associated with servicing the distribution system.

b) While Hydro One does not track this measure, it has been calculated below:



Witness: KIRALY Gregory

Energy Probe Research Foundation Interrogatory # 17

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-03-01 Page: 16 Table 4

Interrogatory:

Please update Table 4 using 2013-2016 data, as well as 2010-2016 data

Response:

Table 4 has been updated with historical data for the two periods 2013-2016 and 2012-2016 as shown below.

SAIDI

SAIDI[1]:	**Avg. 2013-16: 7.4 hours/year**	**Average Number of Hours a Customer is Interrupted**					
	Assumptions			**Forecasted Impact on SAIDI by 2022[2]**			
	Failure Rate/Impact	**Contribution to SAIDI**	**SAIDI Contribution (based on 2013-16)**	**Plan A**	**Plan B**	**Plan C**	**Plan B-M[3]**
Poles	• 0.3k outages/year • 0.4k customers/outage • 5 hours/outage	6%	0.5	12%	10%	(18)%	7%
Stations	• 0.1k outages/year • 0.9k customers/outage • 3 hours/outage	2%	0.2	14%	5%	(4)%	0%
Other Line Components	• 7k outages/year • 0.1k customers/outage • 3 hours/outage	22%	1.6	10%	0%	(10)%	(5)%
Vegetation	• 7k outages/year	31%	2.3	8%	8%	4%	8%
Estimated Impact to SAIDI				6%	3%	-2%	2%
Forecasted SAIDI (hours)				7.0	7.2	7.6	7.3

1-Excludes force majure and loss of supply event
2-These columns reflect the forecasted impact on SAIDI by the end of 2022. Estimated performance improvement is expressed as a positive value; performance deterioration is expressed as a negative value
These forecasted impact do not include changes based on the new vegetation management strategy as the data set is incompatible
3-Impacts for "Plan B-M" refer to Plan "B-Modified"

SAIDI

SAIDI[1]:	Avg. 2012-16: 7.3 hours/year	Average Number of Hours a Customer is Interrupted					
	Assumptions			Forecasted Impact on SAIDI by 2022[2]			
	Failure Rate/Impact	Contribution to SAIDI	SAIDI Contribution (based on 2012-16)	Plan A	Plan B	Plan C	Plan B-M[3]
Poles	• 0.3k outages/year • 0.4k customers/outage • 5 hours/outage	6%	0.4	12%	10%	(18)%	7%
Stations	• 0.1k outages/year • 0.9k customers/outage • 3 hours/outage	2%	0.2	14%	5%	(4)%	0%
Other Line Components	• 7k outages/year • 0.1k customers/outage • 3 hours/outage	21%	1.6	10%	0%	(10)%	(5)%
Vegetation	• 7k outages/year	31%	2.3	8%	8%	4%	8%
Estimated Impact to SAIDI				6%	3%	-2%	2%
Forecasted SAIDI (hours)				6.9	7.1	7.4	7.2

1-Excludes force majure and loss of supply event
2-These columns reflect the forecasted impact on SAIDI by the end of 2022. Estimated performance improvement is expressed as a positive value; performance deterioration is expressed as a negative value
These forecasted impact do not include changes based on the new vegetation management strategy as the data set is incompatible
3-Impacts for "Plan B-M" refer to Plan "B-Modified"

Energy Probe Research Foundation Interrogatory # 18

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-05-01 Page: 8

Interrogatory:

a) Given Hydro One's vast reach and the different rate classes based on density, can Hydro One provide these scorecards for the different rate classes (UR, R1 and R2)?

b) Please update these figures with 2016 and 2017 (if possible) results.

Response:

a) No, the scorecards shown in Figure 1 and Figure 2 of Exhibit A, Tab 5, Schedule 1 are generated by the OEB using the RRR filing data of electricity distributors. Hydro One's proposed Dx OEB Scorecard does show system reliability measures at Urban and Rural levels, refer to b) below.

b) Please refer to Exhibit I, Tab 18, SEC-29.

Energy Probe Research Foundation Interrogatory # 19

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-05-01 Page: 35-37

Interrogatory:

Please provide SAIFI and SAIDI figures by rate class (UR, R1 and R2).

Response:

Please refer to Exhibit I, Tab 24, Energy Probe #34.

Energy Probe Research Foundation Interrogatory # 20

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-05-01 Page: 39-41

Interrogatory:

Please provide cost control figures by rate class (UR, R1 and R2).

Response:

Hydro One does not have the cost control figures by rate class.

Energy Probe Research Foundation Interrogatory # 21

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 3.6 Page: 6

Interrogatory:

How many customers have signed up to Hydro One's pre-determined threshold program?

Response:

The solution was fully operational as of December 2016. As of December 31, 2017, the solution has resulted in the following enrollments:

- 99,000 customers enrolled in "payment due soon" reminders;
- 98,000 customers enrolled in "payment overdue" reminders; and
- 30,500 customers enrolled for "high usage alert" notifications.

Witness: MERALI Imran

Ontario Sustainable Energy Association Interrogatory # 9

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4 Page: 2

Preamble: "The Distribution OEB Scorecard provided in the table below, includes the metrics that Hydro One is proposing to report on and includes targets for 2018. Hydro One proposes to report the results on an annual basis or as determined by the OEB."

Interrogatory:

a) In the Distribution Scorecard, Hydro One proposes additional metrics to be reported on beyond the metrics required in the OEB's Electricity Distributor Scorecard. Has Hydro One considered including an annual target for energy savings to achieve its assigned 2020 target? Why or why not?

b) Has Hydro One considered including targets for the number of new renewable energy projects online each year? Why or why not?

c) Has Hydro One considered reporting on any other additional metrics for conservation in its Distribution Scorecard? Why were they not included?

Response:

a) Hydro One provides an annual update on energy savings achieved in relation to the 2020 target under "Net Cumulative Energy Savings" within the Electricity Distributor Scorecard (Exhibit A, Tab 5, Schedule 1). As noted in Exhibit I-17-OSEA-005, Hydro One was not assigned an annual energy savings target.

b) No, because targets for adding new renewable energy projects are the accountability of the Independent Electricity System Operator (IESO).

c) Hydro One has not proposed additional metrics on conservation in the Electricity Distributor Scorecard since conservation results are provided to the IESO on a monthly basis.

Witness: KIRALY Gregory

School Energy Coalition Interrogatory # 29

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4 Page: 29-43

Interrogatory:

The performance measures contained in Table 16 include a number of measures not included on the proposed OEB Scorecard (p.3). Please provide a single table that shows all performance measures with actual performance from 2011-2016, and targets for 2017-2022.

Response:

All measures in Exhibit B1, Tab 1, Schedule 1, DSP Section 1.4, pp. 29-43, Table 16 are included in either the Electricity Distributor Scorecard or the proposed Dx OEB Scorecard.

Please refer to the updated Electricity Distributor Scorecard and the Dx OEB Scorecard below.

Please note the following regarding the information provided in the scorecards below:

- The OEB revised the reporting methodology for SAIDI and SAIFI to exclude Loss of Supply and Force Majeure. SAIDI and SAIFI results prior to 2012 were not restated.

- The Net Cumulative Energy Savings measure is based on the 2015-2020 Conservation First Framework. The Electricity Distributor Scorecard was revised to show targets for the same period.

- The Net Cumulative Energy Savings results shown for 2017 will be confirmed by the IESO in Q3-2018.

- For the Electricity Distributor Scorecard, consistent with the evidence filed, Hydro One cannot provide targets for the measures in the Financial Ratios Performance Category or measures which are reported by third-parties[1].

- For the Dx OEB Scorecard, consistent with the evidence filed, and due to the denominator variable for OM&A Dollars per Customer and OM&A Dollars per km of Line, Hydro One cannot provide targets for 2018 to 2022. Please refer to Exhibit Q, Tab 1, Schedule 1, Attachment 1, p 16 for the OM&A budget for 2018 to 2022.

- 2017 results for measures in the Financial Ratios Performance Category of the Electricity Distributor Scorecard or in the Cost Control category of the Dx OEB Scorecards cannot be provided at this time.

- Targets for System Reliability Measures in the Dx OEB Scorecard beyond 2018 have not currently been developed (e.g. SAIDI & SAIFI for Urban, Rural).

[1] All measures contained in the Safety and Cost Control Performance Categories

Electricity Distributor Scorecard

Performance Outcomes	Performance Categories	Measures		ACTUALS 2011	2012	2013	2014	2015	2016	2017	TARGETS 2017	2018	2019	2020	2021	2022
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	New Residential/Small Business Services Connected on Time		92.00%	95.70%	97.40%	97.40%	97.50%	98.60%	98.06%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
		Scheduled Appointments Met On Time		93.90%	98.60%	98.40%	99.30%	98.50%	99.50%	98.94%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
		Telephone Calls Answered On Time		81.40%	83.40%	63.90%	69.60%	76.40%	74.20%	82.00%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
	Customer Satisfaction	First Contact Resolution*				78.30%	79.00%	82.00%	82.00%	85.00%	85.0%	86.0%	87.0%	87.0%	88.0%	88.0%
		Billing Accuracy					94.63%	98.59%	99.04%	99.30%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
		Customer Satisfaction Survey Results*				87.00%	85.00%	85.00%	84.00%	84.90%	86.0%	87.0%	87.5%	88.0%	88.5%	89.0%
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	Safety	Level of Public awareness						81.00%	N/A	TBD	N/A	N/A	N/A	N/A	N/A	N/A
		Level of Compliance with Ontario Regulation 22/04 [1]		NI	NI	NI	NI	C	NI	TBD	C	C	C	C	C	C
		Serious Electrical Incident Index	Number of General Public Incidents	8	6	7	4	5	11	TBD	N/A	N/A	N/A	N/A	N/A	4
			Rate per 10, 100, 1000km of line	0.066	0.051	0.059	0.033	0.042	0.091	TBD	N/A	N/A	N/A	N/A	N/A	N/A
	System Reliability**	Average Number of Hours that Power to a Customer is Interrupted [2]			6.98	6.88	7.49	7.65	7.83	7.90	7.5	7.0	6.7	6.4	6.1	5.8
		Average Number of Times that Power to a Customer is Interrupted [2]			2.61	2.49	2.70	2.63	2.47	2.30	2.6	2.4	2.3	2.2	2.1	2.0
	Asset Management	Distribution System Plan Implementation Progress*				Under Review	97%	116%	105%	TBD	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Cost Control	Efficiency Assessment			5	5	5	5	4	TBD	5	5	5	5	5	5
		Total Cost per Customer [3]		$1,072	$1,041	$1,046	$ 1,069	$ 983	$ 987	TBD	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG
		Total Cost per km of Line [3]		$11,064	$10,741	$10,682	$ 10,916	$ 10,198	$ 10,551	TBD	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG	N/A, PEG
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g. in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Conservation & Demand Management	Net Cumulative Energy Savings [4]						17.27%	42.50%	60.50%***	60.5%	75.9%	88.9%	101.0%	N/A, See Footnote	N/A, See Footnote
	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed On Time		95.79%	99.39%	100.00%	100.00%	100.00%	100.00%	99.51%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
		New Micro-embedded Generation Facilities Connected On Time				99.71%	100.00%	99.78%	99.22%	99.77%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)		0.99	0.99	1.00	0.99	0.97	0.80	TBD	N/A	N/A	N/A	N/A	N/A	N/A
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.34	1.30	1.35	1.31	1.19	1.46	TBD	N/A	N/A	N/A	N/A	N/A	N/A
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.66%	9.66%	9.66%	9.66%	9.30%	9.19%	TBD	N/A	N/A	N/A	N/A	N/A	N/A
			Achieved	8.80%	8.72%	8.00%	6.26%	8.77%	8.41%	TBD	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
2. The trend's arrow direction is based on the comparison of the current 5-year rolling average to the fixed 5-year (2010 to 2014) average distributor-specific target on the right. An upward arrow indicates decreasing reliability while downward indicates improving reliability.
3. A benchmarking analysis determines the total cost figures from the distributors' reported information. These figures were generated by the Board based on the total cost benchmarking analysis conducted by Pacific Economics Group Research, LLC and based on the distributor's annual reported information.
4. The CDM measure is based on the new 2015-2020 Conservation First Framework. This measure is under review and subject to change in the future. Since the Framework ends in 2020, the target for this application aligns with the end year of 2020.
*Self-defined metric; no common industry standard.
**System Reliability Measures were restated under the direction of the OEB to exclude both Loss of Supply and Force Majeure - results prior to 2012 were not restated.
***To be verified by the IESO.

Dx OEB Scorecard

			Historical Results						Actual	Target					
RRFE Outcomes		**Measure**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Customer Focus	Customer Satisfaction	Customer Satisfaction - Perception Survey %	77%	78%	80%	67%	70%	66%	71%	72%	74%	75%	75%	76%	76%
		Handling of Unplanned Outages Satisfaction %	81%	79%	78%	75%	76%	75%	76%	76%	77%	78%	78%	79%	79%
		Call Centre Customer Satisfaction %	85%	84%	82%	81%	85%	86%	90%	86%	87%	88%	88%	89%	89%
		My Account Customer Satisfaction %	81%	84%	64%	75%	78%	79%	78%	81%	83%	84%	84%	85%	85%
Operational Effectiveness	Cost Control	Pole Replacement - Gross Cost Per Unit in $	8,541	8,441	7,824	8,928	8,392	8,350	TBD	8,640	8,733	8,908	9,080	9,256	9,437
		Vegetation Management - Gross Cyclical Cost per km $**	New Program						TBD	New Program	3,600	3,643	3,687	2,400	2,428
		Station Refurbishments - Net Cost per MVA in $*	386,000	-	318,000	348,000	500,000	557,000	TBD	461,000	454,000	447,000	440,000	434,000	427,000
		OM&A dollars per customer	456	451	498	551	453	455	TBD	449	455	TBD	TBD	TBD	TBD
		OM&A dollars per km of line**	4,723	4,676	5,109	5,654	4,719	4,773	TBD	4,712	4,773	TBD	TBD	TBD	TBD
	System Reliability	Number of Line Equipment Caused Interruptions	7,681	7,316	7,266	8,311	8,164	7,674	8,786	8,200	8,200	TBD	TBD	TBD	TBD
		Number of Vegetation Caused Interruptions	6,113	6,953	5,791	6,540	6,944	7,439	7,800	6,900	6,500	TBD	TBD	TBD	TBD
		Number of Substation Caused Interruptions	159	144	129	158	141	103	123	145	145	TBD	TBD	TBD	TBD
		SAIDI - Rural - duration in hours	8.2	8.2	8.1	8.6	9.1	9.1	9.4	9.1	9.0	TBD	TBD	TBD	TBD
		SAIFI - Rural - frequency of outages	3.3	3.3	3.0	3.4	3.4	3.1	3.0	3.4	3.4	TBD	TBD	TBD	TBD
		SAIDI - Urban - duration in hours	2.7	3.2	2.2	2.8	2.8	2.4	2.4	2.8	2.8	TBD	TBD	TBD	TBD
		SAIFI - Urban - frequency of outages	1.6	1.7	1.6	2.3	1.4	1.6	1.4	1.7	1.7	TBD	TBD	TBD	TBD
		Large Customer Interruption Frequency (LDA's) - frequency of outages	New Measure		118	147	228	136	162	143	143	TBD	TBD	TBD	TBD

*There were no station refurbishment units matching the criteria completed in 2012

**Number of line kms are based on the annual OEB Yearbook of Electricity Distributors' report, with 2017 and 2018 targets based on 2015 line km actuals.

School Energy Coalition Interrogatory # 30

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4 Page: 3

Interrogatory:

With respect to the OEB Scorecard, please revise the scorecard to include:

a) 'Targets' for 2019 through to 2022.

b) 2011-2016 actual data for Vegetation management – Gross Cyclical Cost per km.

Response:

a) Please refer to Exhibit I-18-SEC-029.

b)

	2012	**2013**	**2014**	**2015**	**2016**
Gross Cyclical Cost per km	$11,510	$12,162	$13,806	$11,487	$11,032

For 2017 and beyond, Hydro One has changed the strategy for the vegetation management program (as described in Exhibit Q, Tab 1, Schedule 1) therefore these categories described are no longer applicable. For the 2018 to 2022 vegetation management unit cost forecasts, under the new strategy, please refer to interrogatory, Exhibit I-18-SEC-029.

School Energy Coalition Interrogatory # 31

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4 Page: 13

Interrogatory:

For each of the outcome measures provided in Table 9, please provide the targets for 2014-2016 that Hydro One provided in EB-2013-0416. For any target not achieved, please provide an explanation.

Response:

Year	Target			Actual		
	2014	**2015**	**2016**	**2014**	**2015**	**2016**
Vegetation Caused Interruptions	6,300	6,300	6,300	6,540	6,944	7,439

Vegetation Caused Interruptions did not achieve the target due in large part to the outstanding provincial backlog of 29% described in DSP Section 2.3.2.2. Hydro One is addressing this issue via the revamped vegetation management program described in Exhibit Q, Section 1, Tab 1. This program is designed to focus on defect correction on a significantly broader scale in order to reduce backlogs and provide better outcomes for customers.

Year	Target			Actual		
	2014	**2015**	**2016**	**2014**	**2015**	**2016**
Substation Caused Interruptions	155	155	155	158	141	103

Substation Caused Interruptions did not achieve the target in 2014 primarily due to an increase in station interruptions caused by equipment failure and foreign interference.

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Distribution Line Equipment Caused Interruptions	7,300	7,300	7,300	8,311	8,164	7,674

Line Equipment caused interruptions did not achieve the target because there were more equipment related failures due to deteriorating condition of the assets.

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Number of Replaced Poles	11,000	11,600	12,200	11,179	11,837	12,355

The Number of Replaced Poles achieved or exceeded targets in all years.

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Number of Pole Top Transformers with PCB Oil	N/A	400	1,000	N/A	34	347

The Number of Pole Top Transformers with PCB Oil did not meet 2015 and 2016 targets primarily due to a redirection of funding that lead to reduced testing and thus contaminated units were not identified for replacement.

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Residential and Small Business Satisfaction (%)	80	81	82	67	70	66

Please refer to Exhibit I-17-Staff-066, part a).

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Handling of Unplanned Outages Satisfaction (%)	80	80	83	75	76	83

Handling of Unplanned Outages Satisfaction (%) did not meet targets primarily due to reliable supply, number of outages, duration of outages, and communication with respect to estimated restoration times. Hydro One continues to employ methods to improve communication with

customers including proactive outbound calls, and improved mobile communication capabilities. However, Hydro One believes the best way to improve this metric is to reduce unplanned outages. Key to addressing this is the new vegetation management strategy described in Exhibit Q, Tab 1, Section 1. Once established, this new methodology is expected to improve reliability outcomes for customers.

Year	Target			Actual		
	2014	2015	2016	2014	2015	2016
Estimated Bills Issued as % of Total Issued*	N/A	N/A	N/A	N/A	4	N/A

*No longer measured, replaced by Bill Accuracy measure.

This measure is no longer measured.

OEB Staff Interrogatory # 67

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.4 Attachments: Performance Measures and Outcome Measures, Attachment 1: Productivity Reporting Governance Document, Page 1964 of 2930.

> *"Deliverables and Stakeholders*
> *Productivity reporting has two primary customers, including the Executive Leadership Team and the OEB. The OEB requires annual reporting to ensure performance levels are being maintained as well as for rate setting purposes during regulatory proceedings. The Executive Leadership Team requires monthly and quarterly reporting in order to successfully manage the business and achieve the business objectives."*

Scorecard	Ontario Energy Board	Executive Leadership Team	Operations Managers
Regulatory			
Tx OEB – Tier 1	Annual	Quarterly	Monthly
Dx OEB	Annual	Quarterly	Monthly
Electricity Distributor Scorecard	Annual	Quarterly	Monthly
Compensation			
Team Scorecard	Upon Request	Monthly	Monthly
Operational Reporting			
Tx OEB – Tier 2 & 3	Not Provided	Quarterly	Monthly
Operational Reporting	Not Provided	Not Provided	Monthly

Interrogatory:

a) Please provide examples of the reporting format that will be used for each of the listed reports.

b) What concrete and measurable metrics will be addressed in each report?

c) Are the metrics being used easily quantifiable and measurable? Please provide examples.

Response:

a) For Transmission scorecards, specifically TX OEB – Tier 1, TX OEB – Tier 2, and TX OEB – Tier 3, Hydro One will provide one consolidated, evolved TX scorecard in the next application for 2019 to 2023. This evolved scorecard will reflect the Findings in the OEB's Decision and Order on Hydro One's 2017 to 2018 Transmission application, section 5.0 Productivity Improvements and Performance Scorecard (EB-2016-0160).

For the format of the Electricity Distributor Scorecard and the proposed Dx OEB Scorecard, please refer to Exhibit I-18-SEC-029.

This is the reporting format used for the Team Scorecard:

Corporate Goal	Definition	Measure
Health and Safety (10%)	Recordable Incidents	Incidents per 200,000 hours
Work Program (25%)	[redacted]	
	Reliability - Dx (SAIDI) average length of outages in hours that a customer experiences	Hours per Customer
	[redacted]	
	Dx In Service Additions Delivery Accuracy	Variance (%) to approved budget of $663M
Net Income (30%)	Net Income to Common Shareholders	$M
Productivity (10%)	Productivity Savings (Capital and OM&A) - Tier 1 savings only	Savings in $M
Customer (25%)	Dx Satisfaction - Improve overall Small and Residential Dx customer satisfaction	Customer Satisfaction

This is the reporting format used for Operational Reporting and the ELT:

Objective	Metric	Measure
Safety	Recordable Incidents	*Overall incidents per 200k hrs – Ops*
	Serious Incidents	*High MRPH per 200k hrs – Ops*
	Preventable Motor Vehicle Accidents	*# preventable accidents per 200k hrs*
Reliability	Transmission Reliability	[redacted]
		[redacted]
	Distribution Reliability	*Dx SAIDI (hrs)*
		Dx SAIFI (# interruptions)
Work Program	In-Service Capital	[redacted]
		Dx Ops In-Service Capital ($M)
		% Capital units complete (spend weighted)
	OM&A	[redacted]
		Dx Ops OM&A ($M)
		% OM&A units complete (spend weighted)
Produc-tivity	Productivity Savings	*Productivity savings ($M)*
Customer	Tx customer experience	[redacted]
	Dx customer experience	*New residential/small business customers connected on time (%)*
		Scheduled appointments met on time (%)
Other	Compliance	*NERC & NPCC standards compliance (# non-compliances)*
	Engagement	*Gallup engagement survey Grand Mean - Ops*

b) The metrics that will be used for the evolved TX scorecard will be presented in the next application for 2019 to 2023.

The Dx OEB scorecard will contain the measures shown in Exhibit I-18-SEC-029.

Hydro One will use the existing measures on the Electricity Distributor Scorecard, shown in Exhibit I-18-SEC-029, in its reporting, and may omit certain measures which are reported by external third parties or which cannot be reported in interim periods during the year.

For measures used in the Team Scorecard, please refer to a) above.

For measures used in the Operational Reporting, please refer to a) above.

c) The metrics that will be used for the evolved TX scorecard will be presented in the next application for 2019 to 2023.

For measure definitions and calculations examples for the Dx OEB Scorecard are provided in Exhibit I-18-SEC-029.

Measures used in the Electricity Distributor Scorecard were set in the OEB's, *Report of the Board, Performance Measurement for Electricity Distributors: A Scorecard Approach (EB-2010-0379), March 5, 2014*. The OEB has allowed electricity distributors flexibility and discretion to self-defining a portion of the measures on the Electricity Distributor Scorecard, these are:

1. First Contact Resolution
2. Customer Satisfaction Survey Results
3. Distribution System Plan Implementation Progress

For measure definitions and explanations relating to the three self-defined metrics, please refer to Exhibit A, Tab 5, Schedule 1, Electricity Distributor Scorecard.

Hydro One believes that the measures on the Team Scorecard and the Operational Reporting are either self-explanatory, i.e. Net Income, or are present in the other scorecards with definitions and examples provided in the application references noted above.

Vulnerable Energy Consumers Coalition Interrogatory # 17

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

A-05-01 Page: 7

Interrogatory:

a) Please provide the most recent scorecards showing 2016 and 2017 results.

Response:

a) Please refer to Exhibit I-18-SEC-029.

Vulnerable Energy Consumers Coalition Interrogatory # 18

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

B1-01-01 Section 1.4

Interrogatory:

a) Defective equipment is the 2nd largest contributor to outage duration. How does Hydro One's scorecard metrics demonstrate to customers the value added of its capital program in reducing outages due to defective equipment?

b) Scheduled outages are the 3rd largest contributor to reliability. What scorecard metric demonstrates Hydro One's ability to minimize schedule outages and their duration?

Response:

a) Hydro One has scorecard metrics related to reliability. Our goal is to achieve a 20% improvement in reducing defective equipment outages over five year period through system renewal investments, distribution automation and worst performing feeder improvements documented in Exhibit B1, Tab 1, Schedule 1 and Exhibit I-23-Staff-85, part a).

b) Hydro One has scorecard metrics related to reliability. Our goal is to achieve a 20% Improvement in Planned Outage impact on reliability over five year period.

Vulnerable Energy Consumers Coalition Interrogatory # 19

Issue:

Issue 18: Are the metrics in the proposed additional scorecard measures appropriate and do they adequately reflect appropriate outcomes?

Reference:

None

Interrogatory:

a) Why is there no relationship between the scorecard measures (or any other metric or outcome) and the rate adjustment methodology? That is, if Hydro One performs poorly as measured by SAIDI/SAIFI why should customers in the following rate year be required to increase or even maintain the same level of funding to the Utility.

Response:

a) On page 17 of the OEB's *Handbook for Utility Rate Applications* ("the Handbook"), issued on October 13, 2016, the OEB states that it's review "of a utility's proposals will consider the utility's past and target performance." Page 24 of the Handbook states that "rates are set for five years considering a five-year forecast of the utility's costs."

Based on the guidance in the Handbook, it is clear that scorecard measures are used to inform the OEB's review of an application but rates are ultimately set on the basis of a forecast of a utility's costs.

Association of Major Power Consumers in Ontario Interrogatory # 12

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

B1-01-01 Section 1.4 Page: 3 - Table 8 Distribution OEB Scorecard

Interrogatory:

a) Please update Table 8 to reflect 2017 actuals and any other evidence updates.
b) Please provide the calculation that underpins the 2011 to 2018 data for the following measures: pole replacement Gross Cost per Unit ($); Station Refurbishments Gross Cost per MVA ($).
c) Vegetation Management Measure: please provide the historical unit costs prior to the development of a new program.
d) Please provide the calculation for the most current Vegetation Management targets in 2017 and 2018.
e) Please provide the subset of asset outages that make up the total number of Line Equipment Caused Interruptions, i.e. provide the number of outages caused by each sub-equipment component for each of the years 2011 to 2017.
f) Does Vegetation Caused Interruption mean the same thing as Tree Contacts. If not please provide the inputs to the total number of Vegetation caused interruptions for the years 2011 to 2017, i.e. provide the type of vegetation caused outages on line equipment and the number of interruptions for each.
g) Does Vegetation Caused outages include vegetation outages during storm events that are not classified as Force Majeure events?
h) Please provide the subset of asset outages that make up the total number of Substation Caused Interruptions, i.e. provide the number of outages caused by each sub-equipment component for each of the years 2011 to 2017.
i) Please explain why Hydro One adjustments to the Vegetation Management program make year over year unit cost comparisons impossible.

Response:

a) Updated measures are not available for 2017 as audited 2017 actuals are not available. Please refer to Exhibit I-18-SEC-029.

b) The calculations that underpins the data for Pole Replacement Gross Cost per Unit ($) and Station Refurbishment Gross Cost per MVA ($) are provided in Exhibit B1, Tab 1, Schedule 1, DSP Section 1.4.1 (5.2.3 A and B) Methods and Measures, pp.6-7.

c) Please refer to Exhibit I-18-SEC-030.

d) The gross cyclical unit cost measure is based on the $3,000/km cost calculated by Clear Path in Exhibit Q, Tab 1, Schedule 1, Attachment 2, Section 5.2 Cost Modeling. The Clear Path estimate was increased by Hydro One by $600 to reflect the increased travel time between defects compared to historical programs, an increase in job planning costs to support the detailed workload data, and the expected transition costs outlined in Exhibit I-10-CME-027.

e) Hydro One does not report customer interruptions to the level of granularity required for equipment subcomponent failures.

f) Yes.

g) Specifically for Table 8 – Yes.

h) Hydro One does not report customer interruptions to the level of granularity required for equipment subcomponent failures.

i) Comparisons between the vegetation management strategy used up to 2016 and the new strategy outlined in Exhibit Q, Tab 1, Schedule 1 are possible. However, there are significant differences in the scope of work which account for the differences in unit prices. Comparisons are provided in attachment 4, Exhibit I-3-SEC-004, Hydro One Board Memo on the Optimal Cycle Protocol, Table 2 and Exhibit Q, Tab 1, Schedule 1, Attachment 2, Section 1.4 Forecast Workload and Cost.

Association of Major Power Consumers in Ontario Interrogatory # 14

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

B1-01-01 Section 1.4-A01 Page: 4

Interrogatory:

a) Page 4: Please provide the Team Scorecard for 2016, 2017 and 2018.

b) Page 4: Please discuss the operational reporting that is done on a monthly basis by Operations Managers.

Response:

a) For the Team Scorecards for up to 2017, please refer to Exhibit I- 3-SEC-002. For the 2018 Team Scorecard, please refer to Exhibit I-40-CME-034, part b).

b) Please refer to Exhibit I-18-Staff-067. The Operations leadership team meets monthly to review all metrics on the Team and Operations Scorecards, reviewing performance impacts and projections for the year.

Building Owners and Managers Association Toronto Interrogatory # 18

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01 Page: 14

Interrogatory:

Plan B vs. Plan C – you say would likely result in a significantly reduced reliability. Please indicate by what percentage.

Response:

Refer to Exhibit B1-1-1 DSP Section 2.4, pages 6-7.

Building Owners and Managers Association Toronto Interrogatory # 19

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Issue 23: Was the customer consultation adequate and does the Distribution System Plan adequately address customer needs and preferences?

Reference:

A-03-01 Page: 15

Interrogatory:

For each of Plans A, B, and C, and Plan B (modified):

a) What are the accumulate rate increases over 2017 rates for the period 2018 to 2022, inclusive, on both an arithmetic and compounded basis?

b) What is the actual annual rate increase for each year from 2019, 2020, 2021, 2022, on both an arithmetic and compounded basis?

c) Why did Hydro One not include an option that would maintain reliability, but not increase it?

d) Why do the percentage contributions to SAIDI total only 57%? Please provide more details on rate of "other line components" in Table 4.

e) Please explain what the "regulatory obligations" referred to are. Please specify.

f) Please confirm that B (modified) would maintain, but not increase reliability.

g) Please provide the reduction in capital spending earned by each of the four measures listed below Table 5.

h) Please provide a calculation which underpin the statement that the forecast reduced load in 2018 relative to 2017 contributes 3.0% of the average increase in distribution rates of 4.9% in 2018 relative to 2017. Please take into account both the forecast decrease in 0.6% in load and the forecast 0.7% increase in customer count, per p24, in 2018 relative to 2017.

i) p18 – Please explain what is meant by "better aligning clearing frequency with reliability performance". Please confirm that there is no increase in branch clearing management program costs relative to those approved in EB-2013-0416/EB-2014-0247.

Response:

a) The rate increases assumed for each of the scenarios for the five-year period 2018-2022 as of December 2016, inclusive of load impact, are provided below. Note: They are based on dated forecasts. Since presenting this information to its Board of Directors, Hydro One has updated its revenue requirement calculations as last reflected in Exhibit Q to this Application.

	Arithmetic (Addition of annual increases)	**Compounded**
Plan A	18.8%	20.2%
Plan B	17.5%	18.7%
Plan C	14.3%	15.1%
Plan B (modified) (December 2016)	16.4%	17.5%

b) The year-over-year increase for each of the scenarios, as of December 2016, inclusive of load impact, is included below:

	2019	**2020**	**2021**	**2022**
Plan A	3.4%	2.5%	3.0%	2.8%
Plan B	3.3%	2.5%	2.7%	2.8%
Plan C	2.9%	1.9%	2.2%	2.3%
Plan B (modified) (December 2016)	3.4%	2.5%	2.4%	2.3%
See note in response (a)				

The compounded increases relative to 2018 rates for each of the scenarios, as of December 2016, inclusive of load impact, are provided below.

	2019	**2020**	**2021**	**2022**
Plan A	3.4%	6.0%	9.2%	12.2%
Plan B	3.3%	5.9%	8.7%	11.8%
Plan C	2.9%	4.9%	7.2%	9.6%
Plan B (modified) (December 2016)	3.4%	6.0%	8.5%	11.0%
See note in response (a)				

c) Hydro One developed plan options to balance the needs and preferences or its customers, the condition and reliability of the distribution system and the effect on customer rates. Given feedback from the OEB in its Decision with Reasons (March 18, 2015) on Hydro One's last distribution application (EB-2013-0416), Hydro One believed it was prudent to improve reliability. See the excerpt below (emphasis added).

> *Hydro One has stated that it is in the fourth quartile of North American utility performance with respect to system reliability and that it has no plan to improve on that score. It submits that to do so would not be cost effective and its customers would not want to pay the cost associated with the improvements.* ***The OEB considers Hydro One's stance on its performance to be misplaced****. Rather than argue that it would be too expensive to move up the ladder in comparison to those that are in the first, second and third quartile,* ***Hydro One should be finding cost effective ways to improve its performance****…*

d) Only the SAIDI contribution attributed to equipment and vegetation caused outages was included; other outage contributors include adverse environment, scheduled, foreign interference, human element, and unknown/other. Other line components include non-pole assets on distribution lines such as conductors and cross arms.

e) For each plan option, Hydro One assumed that it would fulfil its regulatory obligations, including but not limited to:

- Maintaining meter installations for settlement and billing purposes, per the IESO Market Rules;
- Connecting new customers, per the Distribution System Code (DSC);
- Addressing PCBs, per federal PCB Regulation (SOR/2008-273); and
- Responding to power outages, per the DSC.

f) Confirmed. At the time of filing this Application, Plan B (modified) aimed to maintain, but not increase system-wide reliability.

g) Please refer to Exhibit I-7-CCC-11

h) The derivation of the 3% is provided below.

A	2017 Approved Rates Revenue	$1,414,963,948	EB-2016-0081 Draft Rate Order, Exhibit 1.0
B	Rates Revenue at 2018 Load Forecast and Existing 2017 Rates	$1,372,743,246	Sheet 16.1 of 2018 CAM filed at Exhibit G1-3-1, Attachment 1
C=B-A	Revenue Deficiency	-$42,220,702	
C/A	Load Impact	-3.0%	Revenue deficiency will require that rates be increased by 3.0% in 2018

i) Benchmarking evidence suggests that utilities with shorter cycles have better reliability performance. Therefore, by shortening the vegetation management cycle, Hydro One will be better aligning its program management strategies with the goal of improving tree-related reliability. The vegetation management forecast for the 2018 test year (Table 1 in Exhibit C1, Tab 1, Schedule 2) is below the 2017 OEB-approved budget. Thus, there are no vegetation management cost increases compared to the budget approved in EB-2013-0416/EB-2014-0247.

Building Owners and Managers Association Toronto Interrogatory # 20

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01 Page: 16 Table 4

Interrogatory:

How is FM defined?

Response:

Please refer to Exhibit I-9-BOMA-002.

Building Owners and Managers Association Toronto Interrogatory # 38

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

Hydro One Consolidated Business Plan, December 2, Page: 3

Interrogatory:

Hydro One pledges to continue to improve reliability in the distribution system. Does it propose any targets for such improvement over the term of the plan and/or earlier?

Response:

Please refer to Exhibits I-18-SEC-29, I-23-BOMA-B78 and I-19-BOMA-B76 for the proposed reliability targets over the term of the plan.

Building Owners and Managers Association Toronto Interrogatory # 47

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01-03 Appendix A AG: 9

Interrogatory:

Has the Company set annual targets for reliability improvements? Please provide a copy of the feeder optimization model.

Response:

Please refer to Exhibit I-18-SEC-29.

Hydro One does not have a model referred to as a "feeder optimization model".

Building Owners and Managers Association Toronto Interrogatory # 57

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01-04 Page: 7, #8; Savings for "smart meter project"

Interrogatory:

Will the work be completed by the end of 2017, as set out in #8?

Response:

Yes, this work has been completed.

Building Owners and Managers Association Toronto Interrogatory # 58

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01-04 Page: 8

Interrogatory:

What are the savings that will be achieved from the reduction of standards from sixty to forty-five?

Response:

Hydro One has reduced the number of spare transformer standards from 62 down to 48. For the 14 categories that Hydro One has eliminated, there are still in-service transformers in the system. The in-service transformers in these categories either have an on-site spare transformer at the station, or can be replaced with a standard transformer, or have plans in place to voltage convert and remove these transformers from service in the future. As a result, spare transformers do not need to be retained in inventory for these categories.

The spare transformers that Hydro One previously retained in inventory related to these 14 categories had an estimated book value of $0.4 million. These spare transformers have been deployed, and the $0.4 million has been saved through reduction of inventory carrying costs. If Hydro One was to continue supporting these standards and purchase one spare transformer for each of the 14 spare categories that were eliminated, the cost of the additional spares is estimated to be $4.3 million. Therefore, Hydro One has saved at least $0.4 million and potentially an additional $4.3 million through the elimination of the 14 categories.

Building Owners and Managers Association Toronto Interrogatory # 59

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-03-01-04 Page: 8

Interrogatory:

What is the total number of, and percentage of, distribution's customers that have added PQ capability to them? What percentage of total distribution's large customers does this represent? Who is responsible for the cost of adding this capability?

Response:

Hydro One has about 700 power quality event recording meters installed throughout its distribution system, which represents less than 0.1% of total distribution customers. About 30% of Large Distribution Account ("LDA") customers have power quality event recording meters installed. Hydro One funds the installation of power quality event recording meters when deemed necessary to address power quality concerns. The meters are either installed permanently or temporarily depending on the nature of the power quality concern.

Building Owners and Managers Association Toronto Interrogatory # 75

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-05-01 Page: 31

Interrogatory:

Hydro One's number of general and public incidents rate per 10,000 customers and 1,000 km line has increased in 2016 to 0.091 representing eleven incidents up from four in 2015, and above target of 0.035. How does Hydro One propose to meet its target over the term of the rate application period? In the last case, the Board stated that the DSP on schedule metric was not very helpful metric.

Response:

The Company experienced an increase in the Number of General Public Incidents on its distribution system in 2016, beyond the level assigned by the Electrical Safety Authority (ESA). The results were mainly attributable to a doubling in the number of motor vehicle accidents (MVAs) compared to 2015 (eight MVAs in 2016 vs. four MVAs in 2015). While Hydro One's public safety initiatives are not designed to specifically address MVAs, the Company has programs that reinforce public safety messaging, and safety campaigns focused on electrical safety and awareness for children and the public living or working in the vicinity of power lines.

Building Owners and Managers Association Toronto Interrogatory # 76

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-05-01 Page: 33-35

Interrogatory:

What about other rural utilities? How does Hydro One SAID compare with other SAIDI number MEDs in calculating its average SAIDI? If it excluded MEDs, what would the record and forecasts be? Please confirm that West Coast Energy Inc. would be considered a rural system density and rural utilities.

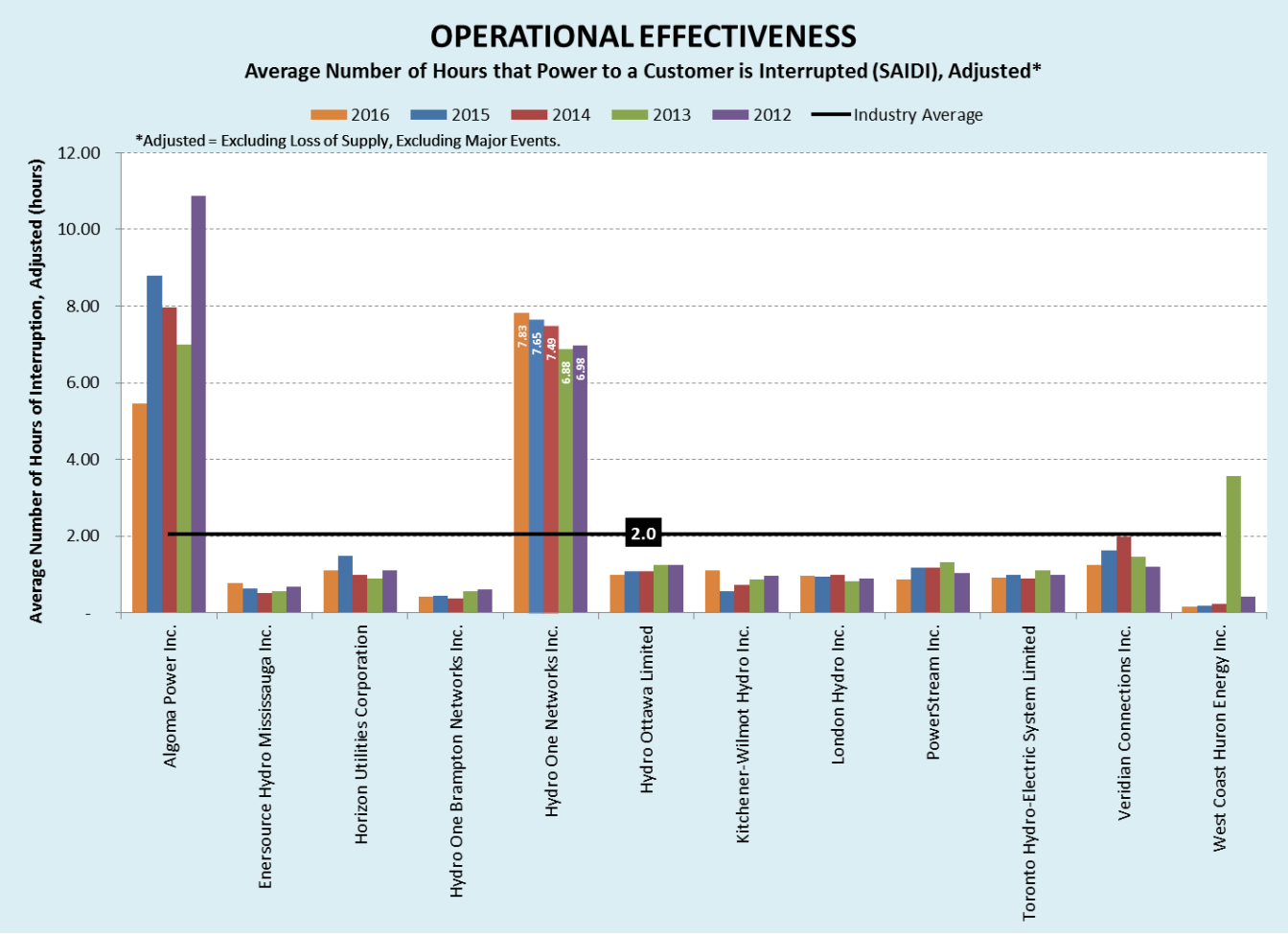
Response:

In Exhibit A, Tab 5, Schedule 1, Section 2 Electricity Distributor Scorecard: Comparator Selection, Hydro One describes in detail, the methodology used to select the industry peers and to define the Industry Average metric (ibid, p.3). Peer selection was based on four methods (ibid, p.4, Table 1): 1) PEG stretch factor assignments, 2) top-ten by customer count using the OEB Yearbook, 3) top-ten by gross PP&E using the OEB Yearbook, and 4) CLD members. Hydro One did not use or attempt to identify which utilities are considered rural in its comparator selection process.

Figure 13 on p.35 of Exhibit A, Tab 5, Schedule 1 illustrates Hydro One's SAIDI (including Major Events, excluding Loss of Supply), compared to the industry peers from Table 1 referred to above. The Hydro One average SAIDI over the 2010 to 2015 period (including Major Events, excluding Loss of Supply) was 15.99 hours – the industry average over the same period was 4.3 hours. In calculating the industry average of 4.3 hours, Hydro One elected to omit the 2011 SAIDI results for West Coast Huron Energy Inc., considering the 49.41 hours to be an outlier.

Using the most recent Electricity Utility Scorecards[1], Hydro One has revised the SAIDI chart below. Excluding Major Events and excluding Loss of Supply, Hydro One's average SAIDI for the 2012-2016 period was 7.37, compared to an industry average of 2.04.

[1] https://www.oeb.ca/utility-performance-and-monitoring/what-are-electricity-utility-scorecards/electricity-utility



The revised forecasted Rate Application Five-Year Target for SAIDI, excluding Major Events and Loss of Supply is 5.8 hours, please refer to Exhibit I-18-SEC-029. This represents a 22% improvement over the 2012-2106 average of 7.37 hours, and about 2.8x above the industry average of 2.04 hours. Hydro One plans on carrying out these improvements over the next five years as outlined in Exhibit I-29-VECC-027, part a), through vegetation management improvements, system renewal investments, distribution automation and worst performing feeder improvements and scheduled outage process and practices improvements.

As noted above, the rural characteristic was not one of the criteria used in selecting the industry peers, as such Hydro One cannot comment on whether or not West Coast Energy would be considered a rural system.

Building Owners and Managers Association Toronto Interrogatory # 77

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

2016 Sector-Wide Consolidated Scorecards of Electricity Distributors

Interrogatory:

Please explain why Hydro One is one of only four Ontario distributors that is rated as NI Needs Improvement under ESA regulation 22/04. When will Hydro One obtain a higher rating? Please discuss.

Response:

For 2016, the Company did not meet the performance target, and received a Needs Improvement (NI) score as assessed by the ESA. The result was due to internal process non-compliance with tagging equipment removed from the Company's distribution poles. The Company has reinforced the related business process and is conducting spot audits to drive compliance.

Hydro One maintains an internal target of C, or Compliant and expects to achieve this through enforcing established processes to ensure full compliance with Regulation 22/04. Internal quality assurance audits, combined with due diligence inspections are also being implemented and will create opportunities for continuous improvement.

For additional details, please refer to Exhibit A, Tab 5, Schedule 1, pp. 28-29.

Building Owners and Managers Association Toronto Interrogatory # 114

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

Exhibit B, Tab 1, Schedule 1, Attachment 1 Page: 135

Interrogatory:

Why are interruptions of less than one minute are not leaving recorded tracked by Hydro One, at least for large customers? Record fluctuations, surges, and spikes? Back-up power – Does Hydro One have a power quality plan?

Response:

Interruptions of less than a minute are not tracked by Hydro One because the system itself was not designed or built capture momentary outages.

The phrase "Record fluctuations, surges, and spikes?" poses no question.

Hydro One uses a two-pronged approach to Power Quality identification:

1) **Proactive Monitoring:** By installing Power Quality measuring devices at strategic points in the system (i.e. supply stations and critical customer locations).

   Data from these devices is available for use in detecting power quality issues. These devices are being installed system wide over the coming years, and are already available in certain areas to allow power quality issues to be identified and resolved. See DSP Section 1.1, page 8 for further details.

2) **Reactive Monitoring:** When undetected Power Quality events occur, Hydro One deploys special power quality meters to help investigate the root cause of power quality disturbances.

Exhibit A, Tab 3, Schedule 1, p. 17, line 19 has additional details on the funding mechanism for Power Quality mitigation, once the root cause has been identified from investigation.

Building Owners and Managers Association Toronto Interrogatory # 116

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

Exhibit B, Tab 1, Schedule 1, Attachment 1, Customer Service

Interrogatory:

Does Hydro One plan to have account managers for Commercial and Industrial customers? Which customers currently have dedicated (shared) account managers? How many account managers does Hydro One Distribution have?

Response:

Hydro One has plans to offer account managers for its Large Distribution Accounts that have a peak demand of 2MW or greater. At present, Hydro One only employs account managers for transmission-connected customers. Hydro One Distribution does not have any account managers.

Energy Probe Research Foundation Interrogatory # 22

Issue:

Issue 19: Are the proposals for performance monitoring and reporting adequate and do the outcomes adequately reflect customer expectations?

Reference:

A-05-01 Page: 5 Table 2

Interrogatory:

Can Hydro One break down these results by residential rate class (UR, R1 and R2)?

Response:

No, these are the results as reported by regulated electrical distribution utilities to the OEB as part of the RRR process.

Building Owners and Managers Association Toronto Interrogatory # 21

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

A-03-01 Page: 21

Interrogatory:

Please discuss how the audited 2016 financial results have led to and update five year period or more forecast. In other words, what specific aspects of the 2016 statement have resulted in an increase in the productivity savings targets? Given that these numbers are targets for future performance, why does the increase result in a lower stretch factor today?

Response:

Hydro One's understanding of this question is that it is in relation to the change in recommendation of the stretch factor to 0.45% that resulted in the application update filed in June of 2017.

The stretch factor is based on a 3-year average difference from benchmark total cost. As indicated on page 6, of the PSE Total Cost Benchmarking study (Exhibit A, Tab 3, Schedule 2, Attachment 2), the additional year of actual data moved the 3-year average to less than the 25% threshold established by the OEB in EB-2010-0379. Table 3-2 of the report shows that Hydro One's cost performance had already been trending positively in 2015. The stretch factor recommendation was updated to 0.45% based on past performance and is consistent with OEB policy.

Canadian Manufacturers & Exporters Interrogatory # 15

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4 Page: 3 Table 8

Interrogatory:

a) To the extent possible, please update the values in table 8 – Distribution OEB Scorecard to include the actuals for 2017, and the variance between 2017 actuals and target.

Response:

a) Provided below is an updated version of Table 8 to include the actuals for 2017, and the variance between 2017 actuals and target. Updated Cost Control measures are not available for 2017 as audited 2017 actuals are not available.

Table 8 – Distribution OEB Scorecard, including actuals for 2017, and the variance between 2017 actuals and target

			Historical Results						Actual	Target		
RRFE Outcomes		Measure	2011	2012	2013	2014	2015	2016	2017	2017	2017 Target Variance	2018
Customer Focus	Customer Satisfaction	Customer Satisfaction - Perception Survey %	77%	78%	80%	67%	70%	66%	71%	72%	-1%	74%
		Handling of Unplanned Outages Satisfaction %	81%	79%	78%	75%	76%	75%	76%	76%	0%	77%
		Call Centre Customer Satisfaction %	85%	84%	82%	81%	85%	86%	90%	86%	4%	87%
		My Account Customer Satisfaction %	81%	84%	64%	75%	78%	79%	90%	81%	9%	83%
Operational Effectiveness	Cost Control	Pole Replacement - Gross Cost Per Unit in $	8,541	8,441	7,824	8,928	8,392	8,350	TBD	8,640	TBD	8,733
		Vegetation Management - Gross Cyclical Cost per km $**			New Program				TBD	New Program	TBD	3,600
		Station Refurbishments - Net Cost per MVA in $*	386,000	-	318,000	348,000	500,000	557,000	TBD	461,000	TBD	454,000
		OM&A dollars per customer	456	451	498	551	453	455	TBD	449	TBD	455
		OM&A dollars per km of line**	4,723	4,676	5,109	5,654	4,719	4,773	TBD	4,712	TBD	4,773
	System Reliability	Number of Line Equipment Caused Interruptions	7,681	7,316	7,266	8,311	8,164	7,674	8,786	8,200	586	8,200
		Number of Vegetation Caused Interruptions	6,113	6,953	5,791	6,540	6,944	7,439	7,800	6,900	900	6,500
		Number of Substation Caused Interruptions	159	144	129	158	141	103	123	145	-22	145
		SAIDI - Rural - duration in hours	8.2	8.2	8.1	8.6	9.1	9.1	9.4	9.1	0.3	9.0
		SAIFI - Rural - frequency of outages	3.3	3.3	3.0	3.4	3.4	3.1	3.0	3.4	-0.4	3.4
		SAIDI - Urban - duration in hours	2.7	3.2	2.2	2.8	2.8	2.4	2.4	2.8	-0.4	2.8
		SAIFI - Urban - frequency of outages	1.6	1.7	1.6	2.3	1.4	1.6	1.4	1.7	-0.3	1.7
		Large Customer Interruption Frequency (LDA's) - frequency of outages	New Measure		118	147	228	136	162	143	19	143

*There were no station refurbishment units matching the criteria completed in 2012

**Number of line kms are based on the annual OEB Yearbook of Electricity Distributors' report, with 2017 and 2018 targets based on 2015 line km actuals.

Ontario Sustainable Energy Association Interrogatory # 10

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4 Page: 33
Customer Service Billing Investments ISD GP 29.

Preamble: "This investment will provide Non-Energy Billing Integration and will also produce a redesigned and improved bill for customers in 2022. This investment is expected to improve Customer Satisfaction Survey Results."

Interrogatory:

a) Why will a new and redesigned bill be implemented in 2022, if one is being introduced in 2018?

b) Was a business case for a new bill design completed? If so, please file it; if not, why not?

c) What are the costs, both previous and current, associated with the current new design and what additional costs are budgeted for the redesign in 2022?

Response:

a) Please refer to Exhibit I-2-Staff-9 part H.

b) An Investment Summary Document for Bill Design is included in Exhibit B1, Tab 1, Schedule 1, DSP Section 3.8 under GP-29 Customer Service Billing Investments. The investment is scheduled for 2022. A business case will be prepared prior to project start, once detailed business requirements are finalized.

c) Please refer to Exhibit I-2-Staff-9 part H.

OEB Staff Interrogatory # 68

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.2.1 Reliability Results, Table 10 - Historical SAIDI Summary; Figure 3 - Chart of Historical SAIDI; Table 11 - Historical SAIFI Summary; Figure 4 - Chart of Historical SAIFI, Page 1936 – 1937 of 2930.

Table 10 - Historical SAIDI Summary

Outage Cause	2012	2013	2014	2015	2016
Including LOS and Including FM	11.3	27.4	9.9	12.9	13.2
Including LOS and Excluding FM	7.5	7.3	7.9	8.3	8.3
Excluding LOS and Including FM	10.6	26.6	9.4	12.2	12.6
Excluding LOS and Excluding FM	7.0	6.9	7.4	7.6	7.8

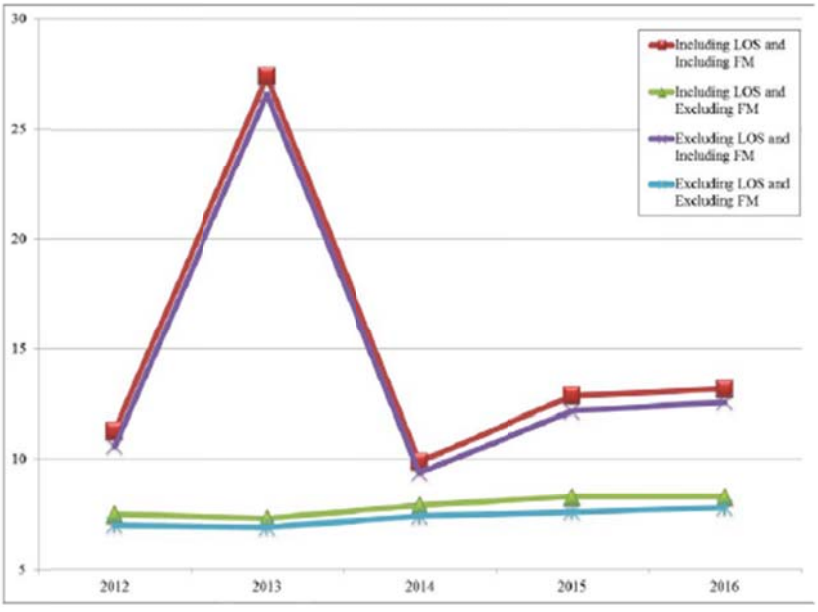


Figure 3 - Chart of Historical SAIDI

Table 11 - Historical SAIFI Summary

Outage Cause	2012	2013	2014	2015	2016
Including LOS and Including FM	3.7	4.6	3.6	3.6	3.4
Including LOS and Excluding FM	3.1	2.8	3.3	3.1	2.8
Excluding LOS and Including FM	3.2	4.2	3.0	3.1	2.9
Excluding LOS and Excluding FM	2.6	2.5	2.7	2.6	2.5

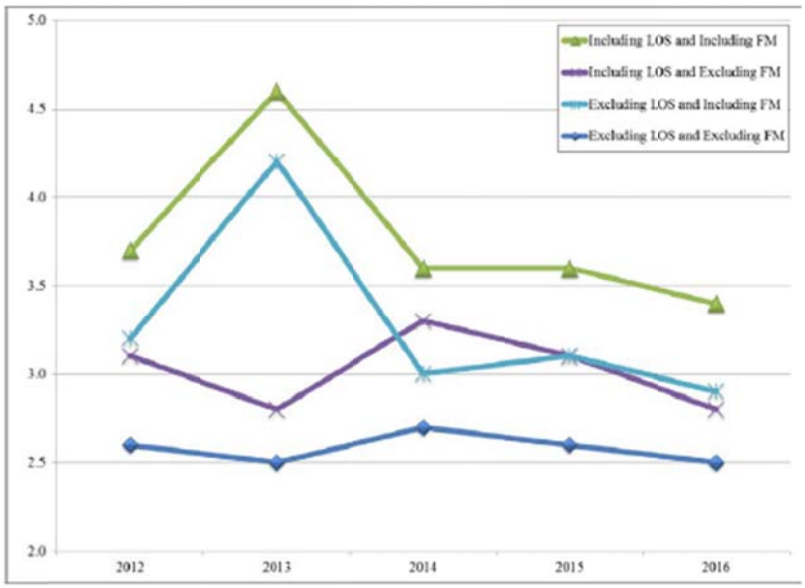


Figure 4 - Chart of Historical SAIFI

Interrogatory:

a) Please confirm that the correct interpretation of the above figures is that the frequency of outages (ex-LOS and Force Majeure) is staying relatively constant, but average outage durations are becoming longer. If confirmed, please explain why the outage frequency is not increasing, in the context of Hydro One's filed evidence that asset condition is deteriorating, and the vegetation management program is falling behind, which would logically anticipate an increasing frequency of outages.

b) Why is it taking longer on average to restore power after outages? Have Hydro One's investments in remote sectionalizing and smart meter technology measurably reduced average outage durations?

Response:

a) The correct interpretation of Figure 4 is that, when Loss of Supply and Force Majeure outages are excluded, SAIFI, which is the average number of interruptions per customer served per year, stays relatively constant. SAIFI is a ratio of the number of customers impacted by outages in a given year to the customers served. Therefore, SAIFI is not representative of the frequency of the number of outages alone, and it is incorrect to conclude that the frequency of outages is not increasing simply because SAIFI is not increasing.

$$\boldsymbol{SAIFI} = \frac{Total\ Customer\ Interruptions}{Total\ Customer\ Served}$$

b) An increased level of weather and vegetation related events, requiring restoration efforts from Forestry and Lines, resulting in longer restoration times. The majority of the longer duration outages are in remote areas which are difficult to access.

Hydro One is committed to improving our restoration times and the Company completed a pilot trial of remote sectionalization in the Owen Sound area, which improved reliability in a measurable way. In recent outages on upgraded feeders the combination of the Distribution Management System and its fault location capability along with remote sectionalization reduced outage times by about 50%. The Company is looking to expand that approach, by installing remote sectionalization in areas where it would prove to be a cost effective reliability improvement investment, and leveraging smart meters to locate outages more accurately, by intelligently pinging meters and examining the meter's real-time power outage notifications.

OEB Staff Interrogatory # 69

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.1 (5.2.3 A and B) Methods and Measures, Table 8 – Distribution OEB Scorecard, Page 1918 of 2930; and Section 1.4.2.1 Reliability Results, Table 13 - SAIDI by Outage Cause, Page 1939 of 2930.

Table 8 – Distribution OEB Scorecard

			Historical Results						Target	
RRF Outcomes		Measure	2011	2012	2013	2014	2015	2016	2017	2018
Customer Focus	Customer Satisfaction	Customer Satisfaction - Perception Survey %	77%	78%	80%	67%	70%	66%	72%	74%
		Handling of Unplanned Outages Satisfaction %	81%	79%	78%	75%	76%	75%	76%	77%
		Call Centre Customer Satisfaction %	85%	84%	82%	81%	85%	86%	86%	87%
		My Account Customer Satisfaction %	81%	84%	64%	75%	78%	79%	81%	83%
Operational Effectiveness	Cost Control	Pole Replacement - Gross Cost Per Unit in $	8,541	8,441	7,824	8,928	8,392	8,350	8,640	8,733
		Vegetation Management - Gross Cyclical Cost per km $			New Program				9,441	9,382
		Station Refurbishments - Gross Cost per MVA in $*	386,000	-	318,000	348,000	500,000	557,000	461,000	454,000
		OM&A dollars per customer	456	451	498	551	453	455	449	455
		OM&A dollars per km of line	4,723	4,676	5,109	5,654	4,719	4,773	4,700	4,758
	System Reliability	Number of Line Equipment Caused Interruptions	7,681	7,316	7,266	8,311	8,164	7,674	8,200	8,200
		Number of Vegetation Caused Interruptions	6,113	6,953	5,791	6,540	6,944	7,439	6,900	6,500
		Number of Substation Caused Interruptions	159	144	129	158	141	103	145	145
		SAIDI - Rural - duration in hours	8.2	8.2	8.1	8.6	9.1	9.1	9.1	9.0
		SAIFI - Rural - frequency of outages	3.3	3.3	3.0	3.4	3.4	3.1	3.4	3.4
		SAIDI - Urban - duration in hours	2.7	3.2	2.2	2.8	2.8	2.4	2.8	2.8
		SAIFI - Urban - frequency of outages	1.6	1.7	1.6	2.3	1.4	1.6	1.7	1.7
		Large Customer Interruption Frequency (LDA's) - frequency of outages	New Measure		135	197	228	136	143	143

*There were no station refurbishment units matching the criteria completed in 2012

Table 13 - SAIDI by Outage Cause

Outage Cause	2012	2013	2014	2015	2016
Adverse Environment	0.03	0.01	0.00	0.02	0.03
Defective Equipment	2.57	6.59	3.03	3.55	3.00
Foreign Interference	0.44	0.46	0.44	0.40	0.41
Human Element	0.04	0.11	0.08	0.08	0.05
Loss of Supply	0.72	0.96	0.56	0.72	0.61
Scheduled	1.41	1.53	1.48	1.43	1.48
Tree Contacts	4.24	14.67	3.36	5.53	6.17
Unknown/Other	1.84	3.09	0.96	1.20	1.43
Includes outages due to Loss of Supply and Force Majuere					

Interrogatory:

a) Table 8 above shows that 2013 had the best SAIDI/SAIFI performance relative to the other years on Table 8. However, Table 13 shows that 2013 was the worst year of the five shown. Please reconcile this apparent contradiction.

b) Does "Defective Equipment" as shown in Table 13 solely account for outages caused by spontaneous/autonomous equipment failure, or does it also include outages where an external trigger initiated the equipment failure, e.g.: ice, snow and wind loads, lightning strikes? If the latter case, is it possible to report separately on these two categories and provide a breakdown of causes?

Response:

a) This perceived contradiction between Table 8 and Table 13 is caused by the difference in criteria used. The SAIDI/SAIFI numbers on Table 8 excludes LOS and FM while Table 13 includes LOS and FM. Due to a large FM event in 2013, including/excluding FM will impact the resulting SAIDI/SAIFI performance relative to other years.

b) The “Defective Equipment” as shown in Table 13 accounts for outages caused by spontaneous/autonomous equipment failure as well as outages where an external trigger initiated the equipment failure. The data set does not have the level of granularity to report separately on these two categories to provide a breakdown of causes.

OEB Staff Interrogatory # 70

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.2.1 Reliability Results, Table 14 - SAIFI by Outage Cause, Page 1940 of 2930.

Table 14 - SAIFI by Outage Cause

Outage Cause	2012	2013	2014	2015	2016
Adverse Environment	0.00	0.01	0.00	0.00	0.00
Defective Equipment	0.73	1.07	0.83	0.88	0.75
Foreign Interference	0.15	0.15	0.16	0.15	0.17
Human Element	0.03	0.06	0.08	0.07	0.04
Loss of Supply	0.54	0.40	0.62	0.50	0.49
Scheduled	0.62	0.68	0.63	0.60	0.57
Tree Contacts	0.80	1.36	0.62	0.78	0.81
Unknown/Other	0.81	0.90	0.61	0.60	0.57
Includes outages due to Loss of Supply and Force Majuere					

Interrogatory:

a) For the Outage Causes listed in Table 14, please indicate which of these causes are within the control of Hydro One, and which are outside of Hydro One's control.

b) Please identify the projects and programs in the planned Capital Expenditure program and OM&A that are intended to address the negative trends in Tree Contacts and Foreign Interference outage measures.

c) Defective Equipment outages appear to be trending downwards. Does this improving performance indicate that there is an opportunity to reduce (or hold steady) sustaining capital expenditures?

Response:

a) **Adverse Environment** - Hydro One has little to no control over Adverse Environment outage causes.

Defective Equipment - Hydro One has some, but not absolute, control over Defective Equipment outage causes.

Foreign Interference - Hydro One has some, but not absolute, control over Foreign Interference outage causes. Depending on the type of interference, Hydro One may not have absolute control over outages caused by external factors such as Motor Vehicle Accidents (MVAs).

Human Element - Hydro One has some, but not absolute, control over Human Element. Outage causes such as Public and Third Party Equipment outage causes may not be in Hydro One's control.

Loss of Supply - Hydro One has some, but not absolute, control over Loss of Supply (LOS). Some factors that can cause LOS outage may include, but not limited to, FM and external interference that caused transmission outage that are out of Hydro One's control

Scheduled - Hydro One has control over Scheduled outages causes.

Tree Contacts - Hydro One has some, but not absolute, control over Tree Contacts outage causes depending upon available resources and if adverse environment conditions are present.

Unknown/Other - Hydro One does not have control over Unknown/Other outage causes.

b) The numbers in the above table do not represent a significant negative trend in the frequency of Tree Contacts and Foreign Interference caused outages. The projects and programs that impact the frequency of Tree Contact outages and Foreign Interference outages are as follows:

Tree Contacts - Capital expenditures that address the frequency of tree contact outages are those that reduce the exposure of lines to vegetation via relocation from heavily forested off road locations to roadside allowance, or that improve the ability to sectionalize the system. Projects of this type are identified in ISDs SR-12 (Distribution Lines Sustainment Initiatives)

and SS-06 (Worst Performing Feeders Program) respectively. The primary OM&A program that addresses the frequency of tree contacts is the Vegetation Management program.

Foreign Interference - Expenditures that address the frequency of foreign interference outages are primarily those that reduce exposure of the system to wildlife. These include the capital Nest Platform component of the component replacement program and installing Animal cover-up at stations with a high number of animal contacts through the Stations OM&A Demand and Planned Corrective Maintenance program.

c) The SAIFI impact of outages classified as "Defective Equipment" is not significantly trending downwards. The relatively flat contribution to SAIFI of equipment outages does not indicate an opportunity to reduce sustaining capital expenditures.

OEB Staff Interrogatory # 71

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

B1-01-01 Section 1.4: (5.2.3) Performance Measurement and Outcome Measures, Section 1.4.2.1 Reliability Results, Table 15 – CAIDI* by Outage Cause, Page 1942 of 2930.

Table 15 – CAIDI* by Outage Cause

Outage Cause	2012	2013	2014	2015	2016
Adverse Environment	8.46	2.43	4.32	4.12	6.40
Defective Equipment	3.50	6.17	3.65	4.06	3.99
Foreign Interference	2.87	3.07	2.77	2.77	2.36
Human Element	1.47	1.67	0.96	1.20	1.36
Loss of Supply	1.34	2.41	0.90	1.43	1.25
Scheduled	2.26	2.25	2.35	2.38	2.60
Tree Contacts	5.31	10.79	5.42	7.12	7.66
Unknown/Other	2.29	3.43	1.59	1.98	2.49
Includes outages due to Loss of Supply and Force Majuere					

Interrogatory:

a) For the Outage Causes listed in Table 15, please indicate which of these causes are within the control of Hydro One, and which are outside of Hydro One's control.

b) Please define what constitutes as Human Element as an outage cause.

c) What action is Hydro One taking to reduce the duration of Tree Contact outages?

d) Table 15 indicates that the duration of outages with Unknown causes has been increasing since 2014. Please identify any actions being taken by Hydro One to reduce the non-identification of outage causes.

   i. Is Hydro One taking any action to reduce the duration of outages with Unknown causes? Please explain.

Witness: JESUS Bruno

ii. Are ongoing Hydro One Smart Grid investments expected to ultimately reduce the number of outages with unknown causes?

Response:

a) Please refer to Exhibit I-20-Staff-070, a).

b) Human Element outage causes constitute Dispatch Error/Employee Error, Employee Error/Set Pole, Employee Error/Switching, and Error/Third Party Equipment.

c) As outlined in EB-2017-0049 Exhibit Q, Tab 1, Schedule 1, p.13, Hydro One has moved to a defect correction program which is expected to improve tree related CAIDI by ensuring that one third of Hydro One's distribution network (34,666 km) will be patrolled yearly to identify and correct vegetation defects. .

Furthermore, as outlined in EB-2017-0049 Exhibit B ISD:SS-06, Worst Performing Feeders, investments will improve reliability on the targeted feeders through measures such as remote operation of switches, and improvement of response time to dispatch which can reduce the duration of outages caused by Tree Contacts.

d)

i. Unknown outages are outages where the field crew have arrived on site and were unable to find any physical damage to the assets. After patrolling the line, they reset the faulted protective device (i.e. recloser, fuse) to restore power. The cause of these outages could be any number of issues (e.g. tree contract, animal contact, weather (lightning/ice), material failure, etc.). Many of the grid modernization investments planned will result in smaller or shorter outages for these Unknown outages.

ii. Hydro One is investigating using analytics to correlate Unknown outages with localized weather data at the time of the outage to isolate the cause of Unknown outages.

Vulnerable Energy Consumers Coalition Interrogatory # 20

Issue:

Issue 20: Does the application promote and incent appropriate outcomes for existing and future customers including factors such as cost control, system reliability, service quality, and bill impacts?

Reference:

A-05-03

Interrogatory:

a) Does Hydro One operate its company (transmission and/or distribution) on a regional basis? If yes, please provide an Ontario Map showing the regional operating zones of the Company.

b) Please explain how each region is managed including a description of the level and number of senior managers/executives responsible for each region.

c) Does Hydro One combine reports from these regions to develop its various reports? Specifically:
   i. does each region provide a SAIDI/SAIFI report? If yes please provide the regional annual reports for the 2012 to 2017 period.
   ii. does each region provide its own emergency response report. If yes please provide these reports for the 2012 – 2017 period.
   iii. does Hydro One benchmark or compare outcomes (including cost efficiencies) of the different regions? If yes please provide these reports.

Response:

a) Yes – Hydro One Distribution operates on a regional basis, map attached.

b) Hydro One's Distribution organization is under a single Vice President (Brad Bowness). There are 4 Directors; Lines, Work Management, Forestry, Quality Assurance and Business Support.

Our Distribution Lines division operates based on 4 Regions made up of the 8 Zones from the diagram, Exhibit I-20-VECC-020, Attachment 1.

- Northern Region = Zone 6 and 7
- Central Region = Zone 3a and 5
- Eastern Region = Zone 3b and 4
- Southern Region = Zone 1 and 2

- 63 Work Centers
- 7 Field Business Centers; red dots on the attached image (Thunder Bay consolidated into Sudbury in Q4 2017)

Under the Lines Director, each Region has a Superintendent accountable for all Lines field forces for that Region. Each Region has approximately 300 fulltime staff with additional PWU hiring hall as required to meet the work program with the Regional Superintendent overseeing 6 Managers accountable for 2-4 work centers. In addition to the 4 Regional Superintendents we also have a dedicated Safety Prime. Hydro One Distribution is currently transitioning our major projects crews from roaming crews into a regionally based model in an effort to drive operational efficiencies; during this time we have 2 Superintendents assisting with this transition of these projects and approximately 400 staff into the regions.

Forestry is structured similar to the Lines division although we have built a 3 Region structure with 3 Superintendents and Safety prime to ensure adequate accountability between layers and minimize the spans as this division has a smaller headcount than the Lines group.

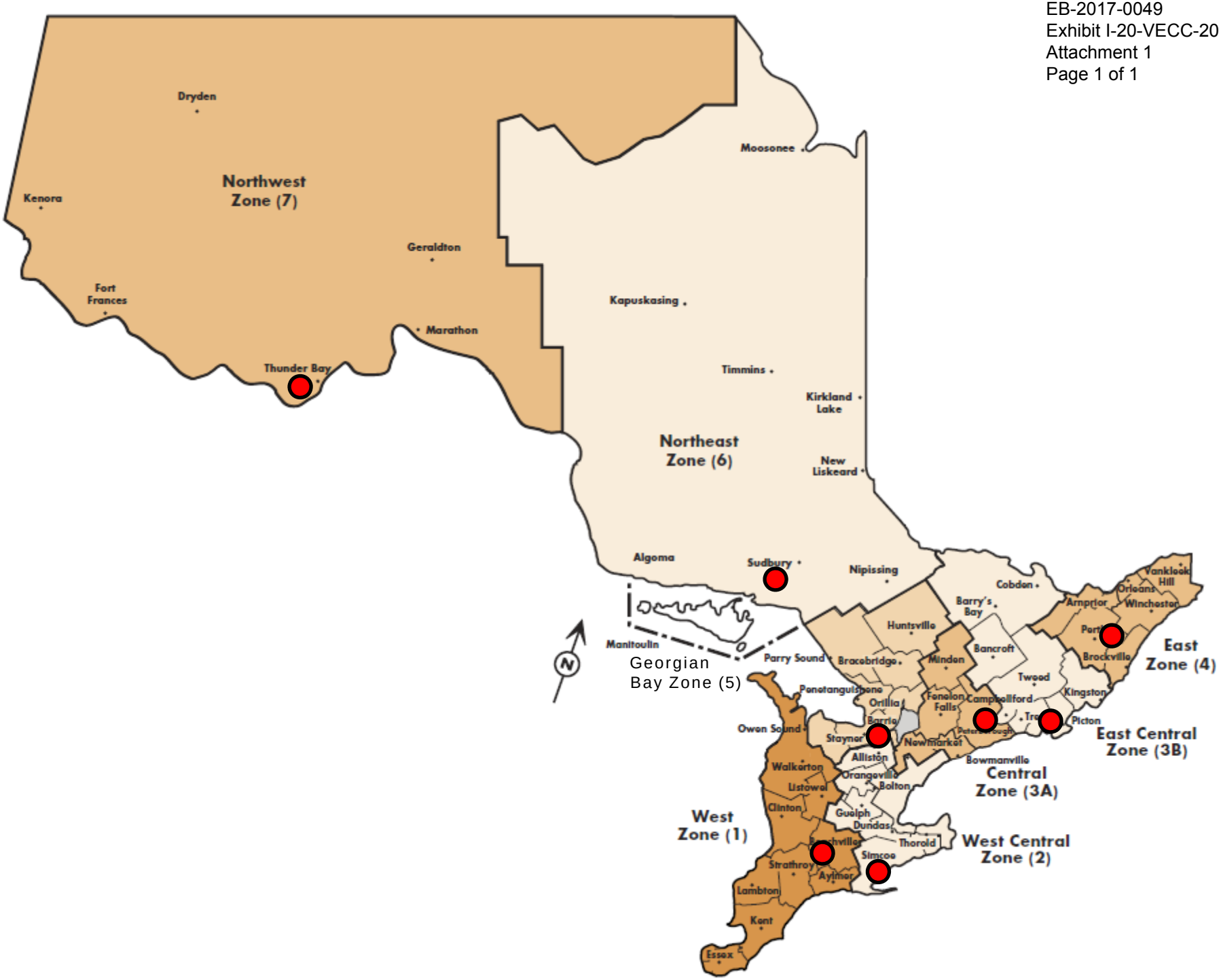
Hydro One's Distribution Work Management and Quality Assurance divisions are not set up regionally but we have structured both teams such that there is alignment within the supervisional layers to maximize operational effectiveness.

- Work Management has 4 divisions each with a Manger; Program Management, Design Services, Field Business Centers, Reporting and Metrics.

- Quality Assurance and Business Support has 3 divisions each with a Manager; Mergers and Acquisitions Integration, Sustainment and Continuous Improvement, Quality Assurance

c)

i. Operating regions do not provide any SAIDI and SAIFI reports.
ii. No.
iii. No.


Dryden
Kenora
Northwest Zone (7)
Geraldton
Fort Frances
Marathon
Thunder Bay
Moosonee
Kapuskasing
Timmins
Kirkland Lake
Northeast Zone (6)
New Liskeard
Algoma
Sudbury
Nipissing
Manitoulin
Georgian Bay Zone (5)
Parry Sound
Huntsville
Bracebridge
Cobden
Barry's Bay
Arnprior
Vankleek Hill
Orleans
Winchester
Bancroft
Mindon
Twood
Brockville
East Zone (4)
Kingston
Picton
Penetanguishene
Orillia
Fenelon Falls
Campbellford
Owen Sound
Barrie
Stayner
Newmarket
Alliston
Bowmanville
East Central Zone (3B)
Walkerton
Orangeville
Bolton
Central Zone (3A)
Listowel
Clinton
Guelph
Dundas
West Zone (1)
Thorold
West Central Zone (2)
Simcoe
Strathroy
Aylmer
Lambton
Kent
Essex

Association of Major Power Consumers in Ontario Interrogatory # 15

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.5 Page: 2-5

Interrogatory:

a) Page 2 Table 17: Please confirm the savings in Table 17 are incremental savings.

b) Page 2 Table 17: Please update Table 17 to reflect the December 21, 2017 update (Hydro One 2018 -2023 Distribution Business Plan Page 17).

c) Page 4: Please confirm the Move to Mobile initiative was successfully implemented in April 2017.

d) Page 4: Please provide an update on expansion of the Move to Mobile project to Provincial Lines and Forestry Services. If expanded over the test period, is there potential for additional savings in 2018 to 2022.

e) Page 5: Please provide the number of cable locates and cable locate costs for the years 2012 to 2022.

Response:

a) Hydro One's productivity plan was reset in 2015 and the associated governance was enhanced at the time of application. Only forward looking initiatives with a direct impact to costs were included in the forward looking plan.

b) Please refer to Exhibit I-25-Staff-123 for the updated Table.

c) Confirmed.

d) Hydro One is still assessing the business requirements for a mobile platform in forestry. We anticipate implementation by end of year 2018. We are not anticipating any additional cost savings within our forestry transformation other than the associated long term cost savings.

Witness: LOPEZ Chris

e) Below are the number of cable locates and cable locate costs for the years 2012 to 2022

	Actual					Forecast					
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Volume	169,042	168,062	197,064	193,600	190,898	200,000	200,000	200,000	200,000	200,000	200,000
Costs ($M)	22.0	23.2	23.8	20.8	10.9	13.6	14.6	14.9	15.2	15.5	15.8

Consumers Council of Canada Interrogatory # 20

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

A-03-01 Page 22 Table 6 and Attachment 1, p. 19

Interrogatory:

Table 6 sets out "Detailed Productivity Savings Forecast". Please explain, in detail, how the numbers in these tables were derived. Are the capital amounts reductions in capital spending or reductions in the revenue requirement? For each year quantify the overall reduction to the revenue requirement as a result of these initiatives.

Response:

Please refer to Exhibit I-25-Staff-123, part a).

All savings have been embedded into the Distribution Business plan which translates to a reduction in the revenue requirement.

The overall reduction to revenue requirement is quantified below:

	2018	2019	2020	2021	2022
Revenue requirement	($34.0)	($39.5)	($44.3)	($48.7)	($52.8)

Witness: LOPEZ Chris

Consumers Council of Canada Interrogatory # 21

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

A-03-01 Page 29

Interrogatory:

The evidence states that HON has identified and applied significant productivity and efficiency improvements that have resulted in an OM&A plan that reflects a commitment to the top priority of keeping bills as low as possible. Please specifically identify these improvements and the expected annual cost savings related to each of them in each year of the rate plan.

Response:

Please refer to Exhibit I-25-Staff-123, part a) for an updated productivity plan.

Consumers Council of Canada Interrogatory # 22

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

Executive Presentation Day - Transcript p. 23

Interrogatory:

Mr. Lopez refers to a commitment to achieve $380 million in productivity savings during the rate plan. Please provide a detailed explanation as to how that number is calculated.

Response:

Please refer to Exhibit I-25-Staff-123, part a). The cumulative productivity savings embedded into the business plan, as updated in evidence filed on December 21, 2017 is $398 million.

Ontario Sustainable Energy Association Interrogatory # 11

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.4 Page: 31-43

Interrogatory:

a) Please demonstrate how productivity gains are accounted for in the forecasts and show how they represent gains relative to external benchmarks. Please provide at least one example from each of the four principles of the *Renewed Regulatory Framework for Electricity Distributors* including reasons and calculations.

Response:

a) The expected lower expenses and lower unit costs resulting from productivity initiatives have been embedded into Hydro One's five year business plan.

The referenced section Exhibit B1, Tab 1, Schedule 1, DSP Section 1.4, pp. 31-43 describe investments that Hydro One is making in order to demonstrate the consideration of the principle in the Renewed Regulatory Framework (RRF). Please see Table 16 on pp. 29-31 for detailed metrics that Hydro One has included on performance scorecards, categorized by RRF Outcome.

Specific investments in each category of the RRF framework are further described on pp. 31-43.

The RRF has influenced Hydro One's Scorecard reporting and performance outcomes as described in the above mentioned Table 16. Productivity initiatives are separately tracked and monitored as detailed in Exhibit I-25-Staff-123 and would primarily influence the outcomes of Financial Performance, Customer Focus and Operational Effectiveness.

Ontario Sustainable Energy Association Interrogatory # 12

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.6 Page: 6

Preamble: "Hydro One inspects its poles more frequently than most utilities, using mostly visual inspections with some light physical inspections, while the others typically perform more rigorous physical inspections and testing."

Interrogatory:

a) Why does Hydro One not use the more rigorous physical inspections and testing used by others?

Response:

a) Hydro One performs line patrol inspections in accordance with the requirements outlined in Appendix C of the Distribution System Code. These requirements result in the inspection of poles more frequently than most utilities. In light of the benchmarking findings, Hydro One is considering including more quantitative pole testing methods within the existing line patrol program, please refer to interrogatory response Exhibit I-25-Staff-126.

Ontario Sustainable Energy Association Interrogatory # 13

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.6 Page: 6

Preamble: "The replacement rate for Hydro One is slower than for the comparison utilities, with the result that Hydro One's pole inventory is the oldest; on average, eight years older than the rest, of the utilities in the comparison group. This matches the planned life of poles which is also about 10 years longer for Hydro One than for the comparison group."

Interrogatory:

a) Please explain why the planned life of poles is about ten years longer for Hydro One than for the comparison group. Is this related to the lack of rigorous inspections and testing and likely to create future higher costs if the planned life is shorter than expected?

Response:

a) Hydro One cannot speak to how other utilities manage their pole population. The expected service life of a pole on Hydro One's distribution system is approximately 62 years based on historical experience. Hydro One pole replacement program addresses the poles in poor condition that are at high risk of failure. Please refer to ISD SR-09 in Exhibit B1, Tab 1, Schedule 1, DSP Section 3.8 which describes the requirement to increase the rate of replacement over the plan to sustainably manage Hydro One's pole population.

School Energy Coalition Interrogatory # 32

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

http://www.marketwired.com/press-release/hydro-one-acquire-avista-create-growing-north-american-utility-leader-with-c312-billion-tsx-h-2226861.htm

Interrogatory:

The press release announcing Hydro One Inc.'s acquisition of Avista states that one of the highlights of the transaction will be, "[e]fficiencies through enhanced scale, innovation, shared IT systems and increased purchasing power provides cost savings for customers and better customer service, complementing both organizations' commitment to excellence."

Please detail and quantify the efficiency savings that Hydro One will realize between 2018 and 2022 because of the transaction. Please provide copies of any internal memorandum, studies or analysis undertaken, outlining these savings.

Response:

Hydro One has not conducted detailed studies quantifying the efficiency savings realized between 2018 and 2022.

The purpose of the excerpt press release statement was to outline areas where efficiencies and savings would likely arise assuming the transaction proceeds and closes. The underlying premise is that completing the transaction provides two large, similar business, with the opportunity to achieve organizational improvements and synergies that result in reduced common costs and which arise from the investment decision, as compared to maintaining the status quo.

Any detailed studies quantifying efficiencies and savings in each of these areas would be dependent on several unknown factors. For example, potential conditions that may be imposed on the closing of the transaction, including, regulatory approval conditions applicable to Avista.

Avista and Hydro One will establish joint working groups early in 2018 in the areas of supply chain, operations, information systems, and innovation to share information and to identify potential efficiencies. Antitrust laws (e.g., Section 1 of the Sherman Act and the Hart-Scott-Rodino Act) permit such integration planning, but restrict certain non-public commercially sensitive information from being shared until after the transaction closes. Thus, specific opportunities for synergies and efficiencies will be determined at that time (i.e. after the transaction closes).

School Energy Coalition Interrogatory # 33

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

Previous Proceeding
[EB-2013-0416, Exhibit I, Tab 2.03, Schedule 6 VECC 42, p.2]

Interrogatory:

With respect to the productivity forecasts in EB-2013-0416:

a) Please complete the shaded areas on the attached table to show for each productivity initiative the actual annual savings achieved in each year between 2014 and 2016, and any revised forecast savings for each year between 2017 and 2019.
b) Please explain any material variances from between actuals and EB-2013-0416 forecasts, and any revised forecasts and EB-2013-0416 forecasts

Response:

a) Hydro One's productivity plan was reset in 2015 and the associated governance was enhanced at the time of application. Only forward looking initiatives with a direct impact to costs were included in the forward looking plan. Legacy initiatives are no longer individually monitored.

   The initiatives in EB-2013-0416 are legacy initiatives and have been included in the underlying plan assumptions and now form part of regular operations. As a result Hydro One is unable to accurately complete the requested table.

   Hydro One's forward looking productivity plan is described in OEB Staff Interrogatory # 123.

b) Please refer to a), above.

OEB Staff Interrogatory # 72

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.5 Page: 2-3

Interrogatory:

Hydro One states that the Move to Mobile project will "result in a 5% increase in field productivity", and goes on to identify a reduction of 29 positions.

a) Please provide an update on the status of the implementation, scheduled for April 2017.

b) Please provide a derivation of the capital savings ($10.3 million in 2018, growing to $10.7 million by 2020) from productivity gained through Move to Mobile.

c) Please provide a derivation of the OM&A savings ($2.7 million in 2018, growing to $2.9 million by 2020) from productivity gained through Move to Mobile.

Response:

a) The Move to Mobile project was successfully implemented in April 2017.

b) The Move to Mobile savings of $10.3-$10.7 million in the 2018-2022 period are expected as a result of field force labour productivity in the distribution lines organization. The technology will allow work to be completed more efficiently resulting in a lower cost per unit. Savings are tracked by comparing historical labour hours per unit to actuals. Expected savings were quantified using an estimate of 5% across the Lines organization and were allocated to the following capital programs:

   a. New Connections (38%)
   b. Joint Use and Line Relocations (14%)
   c. Pole Replacement (32%)
   d. Field Meter Service (3%)
   e. Component Replacement (13%)

c) The Move to Mobile solution will reduce manual data entry requirements and provide savings opportunities in administrative field support. Expected OM&A savings were derived by evaluating positions that will be redundant in field support once Move to Mobile is optimized. 29 positions were identified. Savings are expected to materialize through attrition by 2020.

OEB Staff Interrogatory # 73

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.5 Page: 7

Interrogatory:

Labour Optimization is planned to "optimize the number of high-skilled regular work staff to the level required to complete core work programs."

a) How many 'high-skilled' regular work staff does Hydro One employ?

b) How many 'high-skilled' regular work staff does Hydro One expect to employ in 2022?

c) To what extent does Hydro One expect this will impact recovery times from a potential major weather event with significant forestry effort requirements?

d) What steps is Hydro One taking to manage impacts to recovery times?

Response:

a) In response to this question, "highly skilled" employees are trades and technical employees who work in the core operations of Hydro One's distribution business. There are approximately 1,700 regular employees who would be considered highly skilled.

b) Hydro One anticipates that the number of regular skilled employees will remain constant up to the year 2022.

c) There will be no negative impacts. Hydro One remains mindful of recovery times and committed to improving current response times and reliability statistics.

d) To ensure there are no negative impacts, Hydro One is looking for operational enhancements in the following areas:

- Crew alignment/resourcing structure (single person trouble crew, field business centre consolidation); and

- Technology/grid modernization (communicating line indicators, communicating line reclosers, remote operated switches).

Prior to operationalizing these enhancements, Hydro One is completing detailed assessments including pilots with localized implementation to ensure positive results. Once proven, Hydro One will look to implement them throughout its business and drive positive results.

OEB Staff Interrogatory # 74

Issue:

Issue 21: Does the application adequately account for productivity gains in its forecasts and adequately include expectations for gains relative to external benchmarks?

Reference:

B1-01-01 Section 1.5 Page: 8-9

Interrogatory:

Procurement savings are planned through several measures including "Feedback Rounds – Maximize competitive pressure through multiple feedback rounds on rates, with an opportunity for vendors to improve their proposals" and "Cost Transparency – increase knowledge of bidders' prices and composition to improve Hydro One's ability to challenge and negotiate competitive pricing."

a) Does Hydro One anticipate that the results of these strategies would reveal pricing information of the submitted bids to other vendors? To the public at large?

b) Please explain how the Feedback Rounds and Cost Transparency would work.

c) Please provide a derivation of how much Hydro One expects to save using these measures.

d) Is it reasonable that some vendors, such as competitors and other prospective clients, would hesitate to have their best possible pricing made available. How would Hydro One address this issue?

Response:

a) No. Pricing is not revealed to other vendors or the public.

b) Upon receipt of bids, pricing is reviewed and compared against each qualified proponent's submission. Based on the price, the proponent is placed into a quartile - one (1) through four (4) with one being lowest bid(s) and four being the highest bid(s). This feedback is then sent to each proponent separately, giving them an opportunity to improve their pricing. No pricing or vendor information is revealed. Pricing submissions are expected to be transparent in cost (e.g. margins, overhead).

Witness: BERARDI Rob

c) See Tables 17 and 20 in Exhibit B1, Tab, Schedule 1, Section 1.5 pages 2, 3, 9 and 10.

d) Hydro One uses feedback rounds as a tool to help ensure it receives the best pricing possible. As this is a competitive process, if the vendors are serious about their chances of being awarded a contract, it would be reasonable that they would submit the best pricing possible taking the feedback they received into consideration.

Building Owners and Managers Association Toronto Interrogatory # 35

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

A-03-01-01 Page: 22

Interrogatory:

Why does the Load Impact change so much from year to year? Please explain separately each annual variation, positive or negative. Please confirm that the negative market for 2019, 2020, 2021, 2022, are the measure of customer growth, shift in rate design and in those years. Please disaggregate the impact of factors causing the number for each year.

Response:

Hydro One is providing its response with respect to the load impacts shown on page 21of the updated business plan provided as Attachment 1 to Exhibit Q-01-01 filed December 17, 2017. The explanations provided below also apply to the original reference in the question (Exhibit A-03-01-01, page 24).

The Load Impact is driven by the proposed load forecast *relative to* the approved or forecast load in the prior year. The explanations for the changes in each year are provided below:

- In 2018, the +3.0% load impact results from the change in the proposed 2018 forecast as compared to the 2017 forecast approved by the Board in 2015 as part of Hydro One's application EB-2013-0416. The currently approved 2017 forecast is based on 3 year old data, and was updated for 2018 to reflect available year-end actuals and the current econometric assumptions.
- In 2019, the load impact of +0.2% reflects the slight decrease in forecast load for this year based on the econometric growth and CDM assumptions detailed in the Load Forecasting Exhibit E1-02-01.
- In 2020 and 2022, the load impacts of -0.2% and -0.3% reflect the slight increase in forecast load for these years based on the econometric growth and CDM assumptions detailed in the Load Forecasting Exhibit E1-02-01.

- In 2021, the -2.3% load impact is due to combined effect of a slightly increasing load forecast (same reason as previous bullet) plus the impact of adding the load associated with the acquired utilities that are included as part of Hydro One's total load in that year as a result of harmonizing the acquired utilities within Hydro one's rate structure. Note that in 2021 the incremental costs associated with harmonizing the acquired utilities are also included as part of Hydro One's total revenue requirement.

Building Owners and Managers Association Toronto Interrogatory # 100

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

Exhibit B, Tab 1, Schedule 1 Attachment 1 Page: 94

Interrogatory:

What is your view as to why the small business responses to the telephone survey were more favourable than those expressed through the entire workshop? See, for example, pp82 and 92; and pp86 and 96.

Response:

The final report from Ipsos did not provide any insight on the differences.

Building Owners and Managers Association Toronto Interrogatory # 104

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

Exhibit B, Tab 1, Schedule 1 Attachment 1 Page: 123

Interrogatory:

How has HONI incorporated the need for more rapid power outage restoration into its five-year DSP?

Response:

Outage restoration response time will be improved through the implementation of four capital investments proposed as part of Hydro One's Distribution System Plan:

- SS-06 Worst Performing Feeders
- SS-07 Advanced Distribution System ("ADS")
- SR-05 Distribution Station Feeder Protection Upgrade
- SR-06 Distribution Station Refurbishment

Through implementation of the Worst Performing Feeder investment Hydro One will be installing various pieces of distribution equipment that will be capable of remote monitoring and control, such as switches, reclosers and fault current indicators. Electronic reclosers capable of remote monitoring and control at distribution stations will also be deployed through the Distribution Station Feeder Protection Upgrade and Distribution Station Refurbishment investments. The ADS investment will enable Hydro One's grid control room to have the capability to remotely monitor and control these devices. Together these investments will allow Hydro One to quickly identify when an outage has occurred as well as the location of the source of the outage and in turn potentially remotely restore power to customers on the unaffected sections. Additionally, quick identification of the location of the source of the outage will reduce outage times by deploying crews directly to the source of the outage as opposed to having to patrol the entire feeder and hence enable them to restore power more quickly.

Building Owners and Managers Association Toronto Interrogatory # 105

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

Exhibit B, Tab 1, Schedule 1, Attachment 1 Page: 127

Interrogatory:

Please confirm that LDCs that are embedded in Hydro One and therefore include Hydro One Distribution charges in their rates are entitled to pass those charges through to their customers.

Response:

Confirmed.

Building Owners and Managers Association Toronto Interrogatory # 108

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

Exhibit B, Tab 1, Schedule 1, Attachment 1 Page: 129

Interrogatory:

What did you mean by differentiated services, customer series, better service, or more service?

Response:

In Exhibit B1, Tab 1, Schedule 1, DSP Section 1.3, Attachment 1: Distribution Customer Engagement Report, p.128, Hydro One asked large customers if they had an expectation of higher or differentiated service. The question was intended to obtain customer feedback to determine if large customers expect a higher or different service than general customers. The next part of the question asked the customer to explain their answer. The purpose of this question was to ascertain what services large customers valued to better understand the needs of this customer segment.

Building Owners and Managers Association Toronto Interrogatory # 122

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

Exhibit B, Tab 1, Schedule 1; DSP 2.6 Page 7

Interrogatory:

a) Please provide a copy of any written strategic directive provided by HONI's senior executives, to inform the planning agenda for the 2017-2022 period.

b) What is meant by "The forecasts presented are weather-normal at the wholesale level"? (our emphasis)

Response:

a) There was no written strategic directive provided by HONI's senior executives. For budget guidance, please refer to Exhibit I-3-SEC-001. Please see section 2.1 of the DSP (Exhibit B1, Tab 1, Schedule 1) for the strategic context for the investment planning process.

b) The forecast of load at the wholesale level predicts the future load measured at the high-side of transformers connecting Hydro One's distribution system to the IESO-controlled grid and, as such, it includes distribution losses. Moreover, the forecast represents the future wholesale load under normal weather conditions.

Building Owners and Managers Association Toronto Interrogatory # 127

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

B1-01-01 Section 2.2

Interrogatory:

a) A small part of the distribution system is monitored. What percentage of lines (distance) are monitored, breakers, and switches, for the distribution network?

b) Are all distribution stations monitored remotely? If not, what percentage are?

c) What will those percentages be at the end of the five year plan, at the midpoint of the plan?

Response:

a) On distribution circuits emanating from the transmission system, all feeder breakers are monitored and controlled remotely from the station. On distribution lines, only feeders in the Owen Sound pilot are monitored and controlled (<1%).

b) For distribution stations, only the stations that were part of the Owen Sound pilot are monitored and controlled (<1%).

c) By the end of the five year plan about 7% of distribution stations and about 6% of distribution lines will be monitored and controlled. At the mid-point in the plan about 3% of distribution stations and lines will be monitored and controlled.

Building Owners and Managers Association Toronto Interrogatory # 128

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

B1-01-01 Section 2.2 Page: 4

Interrogatory:

What is the significance of HONI's major events to be force majeure events, operationally, and legally?

Response:

The significance of a major event being declared a Force Majeure event (refer to Exhibit I-9-BOMA-002) is an event that is beyond the control of the distributor and is:

a) unforeseeable;
b) unpredictable;
c) unpreventable; or
d) unavoidable.

Such events disrupt normal business operations and occur so infrequently that it would be uneconomical to take them into account when designing and operating the distribution system. Such events cause exceptional and/or extensive damage to assets, they take significantly longer than usual to repair, and they affect a substantial number of customers.

Energy Probe Research Foundation Interrogatory # 23

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-01-02 Page: 4

Interrogatory:

a) Please provide an estimate to how much work was deferred (in nominal dollar amounts) in 2015 in order to address problems with the customer information system.

b) What projects in particular were deferred as a result of problems with the customer information system and have they been addressed since?

Response:

a) As documented in Table 1 in Exhibit C1, Tab 1, Schedule 2, the 2015 actual expenditure for Sustaining OM&A was $11.9 million below OEB-approved.

b) The Sustaining OM&A programs that were deferred as a result of the redirection noted in part (a) were: stations maintenance, lines maintenance, and vegetation management brush control. As these are program investments, the asset need is addressed over the subsequent planning years.

Energy Probe Research Foundation Interrogatory # 24

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

A-03-01 Page: 14-18

Interrogatory:

Hydro One deferred to future years previously planned 2018 capital spending on wood pole replacements, station refurbishments, component replacements, system capability reinforcement, information technology and facilities and real estate in moving from Plan B to Plan B Modified.

a) Please provide a list of capital spending that was deferred showing the amount in each category and the subsequent year(s) that the capital spending has been deferred to.

b) Please file all presentations and reports that were given to senior management in support of the deferral.

Response:

a) Refer to Exhibit I-7-CCC-11 for a Plan B to Plan B Modified variance analysis.

b) Please refer to the November 2016 and December 2016 materials provided in Exhibit I-3-SEC-4.

Energy Probe Research Foundation Interrogatory # 25

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

A-03-01 Page: 26 Table 9

Interrogatory:

Does the caption "Plan" indicate an OEB approved spending plan. If it does, please provide reference to OEB approval. Note 1 indicates that there were no Board approved capital expenditure budgets for 2013 and 2014 but the table shows Plan numbers. Please explain the source of those numbers and provide actual expenditures for those years.

Response:

In Table 9 of Exhibit A, Tab 3, Schedule 1 and Table, the columns for 2013 and 2014 should say "Actuals" rather than "Plan".

Energy Probe Research Foundation Interrogatory # 26

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-01-02 Page: 17

Interrogatory:

Please explain why the "Line Maintenance" programs are repeatedly underspent.

Response:

Please refer to interrogatory response Exhibit I-38-Staff-188 for an explanation on Line Maintenance program spending.

Energy Probe Research Foundation Interrogatory # 27

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-01-05 Page: 3

Interrogatory:

Please provide an updated cost of Call Center Operations now that Hydro One has agreed to end the Inergi contract (as stated at the most recent conference).

Response:

Hydro One has not operated the contact centre since 2002. As such, the actual cost of running the operation is unknown. With the information available at the time, Hydro One's assessment is that the contact centre can be operated for the same cost as what is paid to Inergi. The forecast presented in Exhibit C1, Tab 1, Schedule 5 is unchanged.

Energy Probe Research Foundation Interrogatory # 28

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-01-07 Page: 15

Interrogatory:

Considering that Hydro One will no longer be outsourcing certain customer care activities as disclosed at the presentation of the application on December 22, please explain why there is an increase in the forecast of outsourcing costs in 2018.

Response:

The increase in 2018 includes anticipated costs associated with retendering the entire outsourcing arrangement, including the Customer Service Operation (CSO), Information Technology Services, Supply Chain, Settlements, Finance, and Pay. Of the increase from 2017 to 2018, approximately $0.2 million relates to the activities that will not be retendered associated with CSO, which is below the materiality threshold of $1 million.

Energy Probe Research Foundation Interrogatory # 29

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-05-01

Interrogatory:

Based on the statements made at the Presentation of the application on December 22, Hydro One is reviewing its customer care outsourcing arrangements.

a) Please explain the nature of the review and any decisions that were made as a result of the review.

b) Please file any reports or presentations that were given to senior management to assist them in their decision on changes in outsourcing.

Response:

a) Hydro One evaluated three alternatives for the delivery of services after the expiry of the initial term, which ends February 28, 2018:

i. Extend the existing contract with Inergi;
ii. Retender the services via a competitive RFP process; and
iii. Insource the Contact Centre and deliver the services directly

Hydro One examined the benefits, costs, and risks associated with insourcing the operation at the end of the existing term (February 28, 2018). In order to make an informed decision, Hydro One engaged in discussions with the Power Workers Union (PWU) and Society of Professional Engineers in 2017, the unions that represent the approximate 400 employees who currently work in Inergi's contact centre.

b) The attached presentation was provided to senior management to assist them in their decision.

Contact Centre of the Future

August 8th, 2017

hydro One

Context

2002

Hydro One has outsourced the delivery of Customer Service to Inergi LP since 2002, who contracted the services to Vertex until 2015.

March 2015

Hydro One signed a three year agreement with Inergi to deliver the services directly in March 2015. The current term expires February 28, 2018 and Hydro One has two options to extend (until the end of 2018 and the end of 2019).

2015 & 2016

Inergi struggled to meet service levels in 2015 and 2016 as a result of high call volumes and Inergi's severe staffing shortfalls. Although performance has improved in 2017, there are still a number of shortcomings with the service delivery.

Feb 28, 2018

Hydro One's contract with Inergi expires February 28, 2018. As such, Hydro One needs to determine how the services should be delivered.

Evaluation of Alternatives

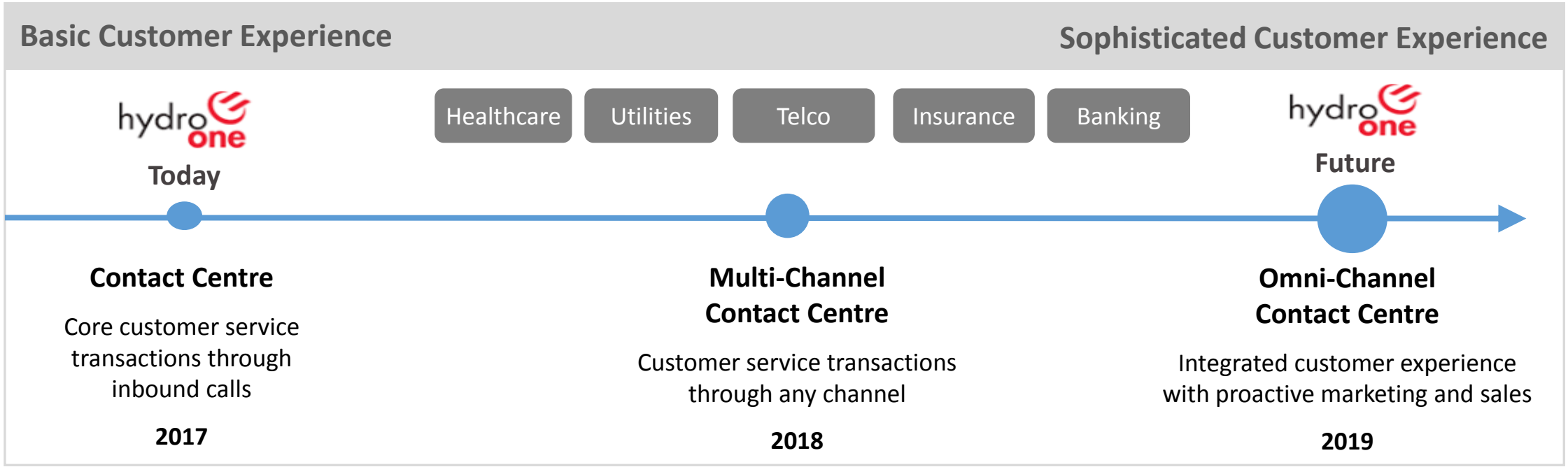
Hydro One evaluated three alternatives for the delivery of services after the expiry of the initial term, which ends February 28, 2018:

	Alternative	Evaluation
1	**Extend the Existing Contract with Inergi**	The current contact with Inergi has two extension options, 10 months until December 2018 and an additional 12 months until December 2019. The extension options include a 3% annual price decline. Despite the price decline, exercising this option would result in Hydro One paying above market value rates for the service.
2	**Retender the Services via a Competitive RFP Process**	Hydro One issued a competitive request for proposal (RFP) for Customer Service operations in 2014. Given the constraints (unionized workforce and requirement to remain in Ontario), only 3 vendors submitted bids (Inergi, Vertex, and Wipro). The management team believes that if Hydro One conducted another RFP for these services, we would not get viable responses.
3	**Insource the Contact Centre and Deliver the Services Directly**	After completing an assessment of the current operations and reaching an agreement regarding changes to the union agreements, Hydro One believes we can deliver an improved level of service to our customers at a reduced cost. Moreover, we believe insourcing the contact centre provides maximum flexibility for any future opportunities that may exist as a result of the Avista acquisition.

Business Objectives

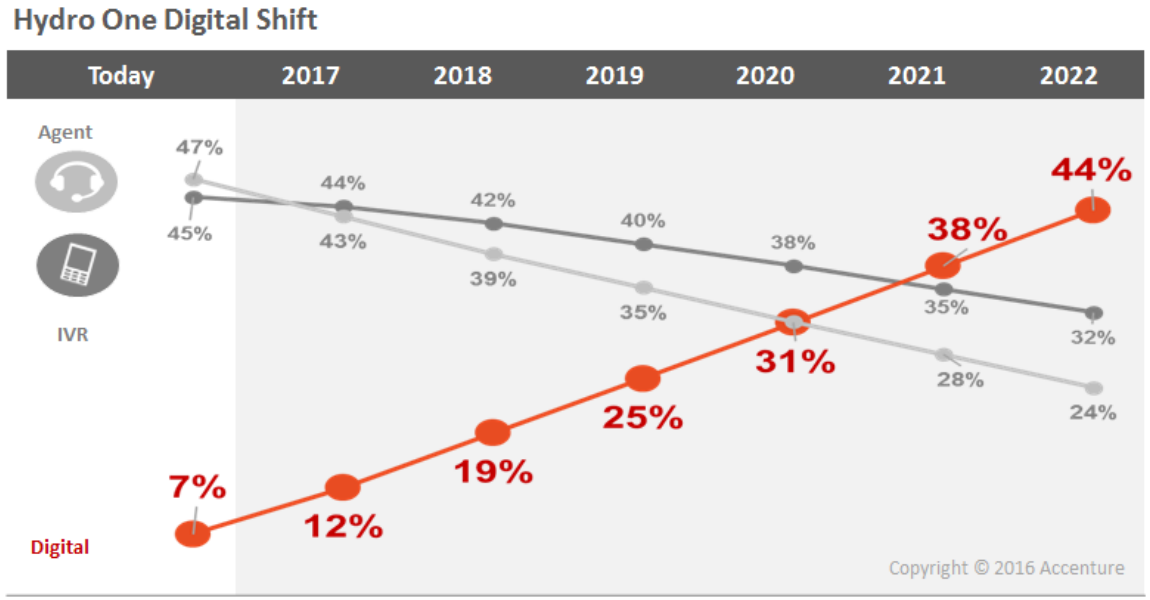
The current contract has a number of shortcomings and is not structured in a way that will allow Hydro One to meet its long term business objectives. When evaluating alternatives for the delivery of the services for March 1, 2018 and beyond, Hydro One had three primary business objectives:

1. **Improve Customer Service** – Initiate a transformation in the contact centre to improve customer service, accelerate the transition to digital channels, and build the flexibility to respond to new business requirements (i.e. chat, social media, etc.).



Business Objectives Continued

2. **Reduce Operating Costs** – As we continue to invest, enhance, and market our digital assets, inbound call volumes in the contact centre are expected to decline, as depicted in the graphic below. Initiatives such as bill redesign and the Fair Hydro Plan are also expected to reduce call volumes. Hydro One customers and shareholders should benefit from the reduction in operational expenditure.



3. **Increase Flexibility** – As Hydro One continues to diversify into new markets and businesses, our contact centre should be well positioned to respond to new business needs and opportunities that may arise (i.e. synergies associated with utility acquisitions, sales and marketing of new products and services, etc.).

Customer & Employee Benefits

In addition to the financial benefits, Hydro One believes there are number of additional non-monetary benefits that could be realized by having a direct relationship with our customers and the employees who serve them.

	Inergi Experience	Hydro One Experience
Customer Information	Inergi focuses on getting customers off the phone quickly in order to reduce costs. This prevents the Company from spending time to collect customer email addresses, mobile phone numbers, and/or promote additional products and services.	The appropriate amount of time would be spent on each call to collect vital information, which in the future will enhance the customer experience and/or reduce operating costs. Furthermore, Hydro One will have a direct working relationship with our customers, which is core to improving customer experience.
Outage Handling	Inergi only provides minimal contact centre coverage during outages that occur during evenings and weekends. This results in thousands of customers not being able to report an outage or receive an update.	Customers would receive an enhanced level of service during outages and would be able to speak to a live agent more frequently.
Employee Benefits	Employees receive minimal coaching and have few opportunities for professional advancement. In addition, given the uncertainty surrounding the long term viability of the contract, some employees are fearful for their jobs and pensions.	Rejoining the Hydro One family will provide employees with job security and access to Hydro One's training, development, and career opportunities.

Energy Probe Research Foundation Interrogatory # 30

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-04-01 Page: 15

Interrogatory:

Please file the 2015 Time Study mentioned in the Black & Veatch report.

Response:

The Time Study approach is detailed in the Black & Veatch report in Exhibit C1, Tab 4, Schedule 1 Attachment 1. The results of the study are shown in the table below.

Business Unit OMA / Capital	Tx		Dx		Sum	Tx	Dx	OMA	Cap
	OMA	Cap	OMA	Cap	Total				
EVP Operations	15.4%	43.4%	24.4%	16.7%	100.0%	58.8%	41.2%	39.8%	60.2%
Key Account Management	27.5%	1.5%	70.9%	0.1%	100.0%	29.0%	71.0%	98.4%	1.6%
Customer Program Delivery	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%
Cust Strategy & Conservation	2.4%	0.0%	97.6%	0.0%	100.0%	2.4%	97.6%	100.0%	0.0%
Customer Care	9.7%	0.0%	89.5%	0.8%	100.0%	9.7%	90.3%	99.2%	0.8%
Meter to Bill	0.0%	0.0%	82.3%	17.7%	100.0%	0.0%	100.0%	82.3%	17.7%
VP Customer Services	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%
Dx Asset Management	7.2%	3.9%	39.7%	49.3%	100.0%	11.0%	89.0%	46.9%	53.1%
Network Connections & Development	20.7%	61.2%	10.1%	8.0%	100.0%	81.9%	18.1%	30.8%	69.2%
Reliability Studies, Strategies & Compliance	59.7%	30.5%	8.2%	1.6%	100.0%	90.2%	9.8%	67.8%	32.2%
System Planning	9.0%	90.3%	0.7%	0.0%	100.0%	99.3%	0.7%	9.7%	90.3%
Planning & Optimization	91.7%	8.3%	0.0%	0.0%	100.0%	100.0%	0.0%	91.7%	8.3%
Operating	43.4%	22.2%	22.6%	11.9%	100.0%	65.6%	34.4%	65.9%	34.1%
VP Planning	33.5%	19.8%	31.0%	15.7%	100.0%	53.2%	46.8%	64.5%	35.5%
Tx Asset Management	42.1%	56.9%	0.7%	0.3%	100.0%	99.0%	1.0%	42.8%	57.2%

Ontario Sustainable Energy Association Interrogatory # 14

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

C1-01-09 Page: 6

Preamble: "Capital IT spending is lower. Significant factor is Hydro One's minimum capitalization threshold of $2M compared to the peer group average of $250K-$500K."

Interrogatory:

a) Please provide a comparison of IT spending in total: capital and OM&A.

Response:

a) IT Capital spending for Historical and Bridge Year totals are outlined in Exhibit B1, Tab 1, Schedule 1, DSP Section 3.2 Pages 3 & 4 of 9, Table 55 – Category General Plant, SDOC Breakdown – Cornerstone and Information Technology.

IT Capital spending for Test Years totals are outlined in Exhibit B1, Tab 1, Schedule 1, DSP Section 3.2 Page 7 of 9, Table 57 – Category General Plant, SDOC Breakdown – Cornerstone and Information Technology.

IT OM&A spending total detailed in Exhibit C1, Tab 1, Schedule 9 Page 2 of 15, Table 2.

Ontario Sustainable Energy Association Interrogatory # 15

Issue:

Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage within the revenue requirement proposed over the course of the custom incentive rate plan term?

Reference:

B1-01-01 Section 1.6 Page: 6
Preamble: "Reduce materiality threshold for IT capital expenditure."

Interrogatory:

a) How will this recommendation save money overall? Will it increase OM&A and reduce capital and depreciation?

Response:

Please refer to Exhibit I-10-Staff-49 part (b).