

1 **Building Owners and Managers Association Toronto Interrogatory # 34**

2
3 **Issue:**

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

7
8 **Reference:**

9 A-03-01-01 Page: 22

10
11 **Interrogatory:**

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

14
15 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 71**

2
3 **Issue:**

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

7
8 **Reference:**

9 A-05-01

10
11 **Interrogatory:**

- 12 a) No longer using the six.
- 13
- 14 b) Please provide the 2016 data for the two scorecards shown at pp 7 and 8. Please explain the
15 difference in the two documents, for example, why do the returns on equity vary so much?

16
17 **Response:**

- 18 a) This interrogatory poses no question.
- 19
- 20 b) Please refer to Exhibit I-18-SEC-29 for 2016 data.
- 21
- 22 i. Figure 1 and Figure 2 in Exhibit A, Tab 5, Schedule 1 are identical. Figure 2 adds the
23 orange column, titled Rate Application Five-Year Target to illustrate the 2022 targets
24 for the measures.
- 25
- 26 ii. There is no difference between the measures or results between Figure 1 and Figure
27 2.

1 **Building Owners and Managers Association Toronto Interrogatory # 80**

2
3 **Issue:**

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

7
8 **Reference:**

9 2016 Sector-Wide Consolidated Scorecards of Electricity Distributors Page: 41

10
11 **Interrogatory:**

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

13
14 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 83**

2
3 **Issue:**

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

7
8 **Reference:**

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

10
11 **Interrogatory:**

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

14
15 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 84**

2
3 **Issue:**

4 Issue 17: Does the application adequately incorporate and reflect the four outcomes identified in
5 the Rate Handbook: customer focus, operational effectiveness, public policy responsiveness, and
6 financial performance?
7

8 **Reference:**

9 A-05-03 Page: 8
10

11 **Interrogatory:**

12 Where is Force Majeure event defined in relation to service quality performance indicators?
13 Please provide HONI's definition.
14

15 **Response:**

16 Please refer to Exhibit I-9-BOMA-002 for the definition of Force Majeure.
17

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

Customer Experience

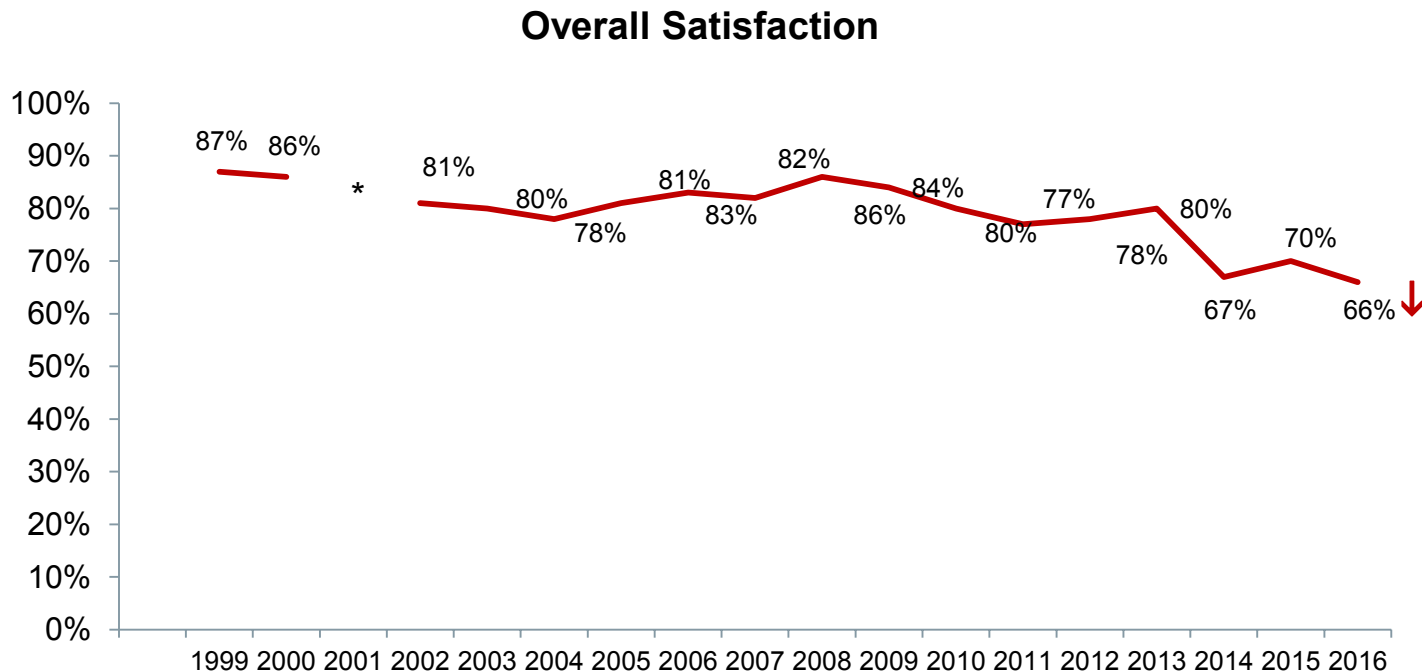
Residential and Small Business Customer Satisfaction Study

December 2016 (Revised February, 2017)

Prepared by: Ipsos



Overall Satisfaction – Survey Results

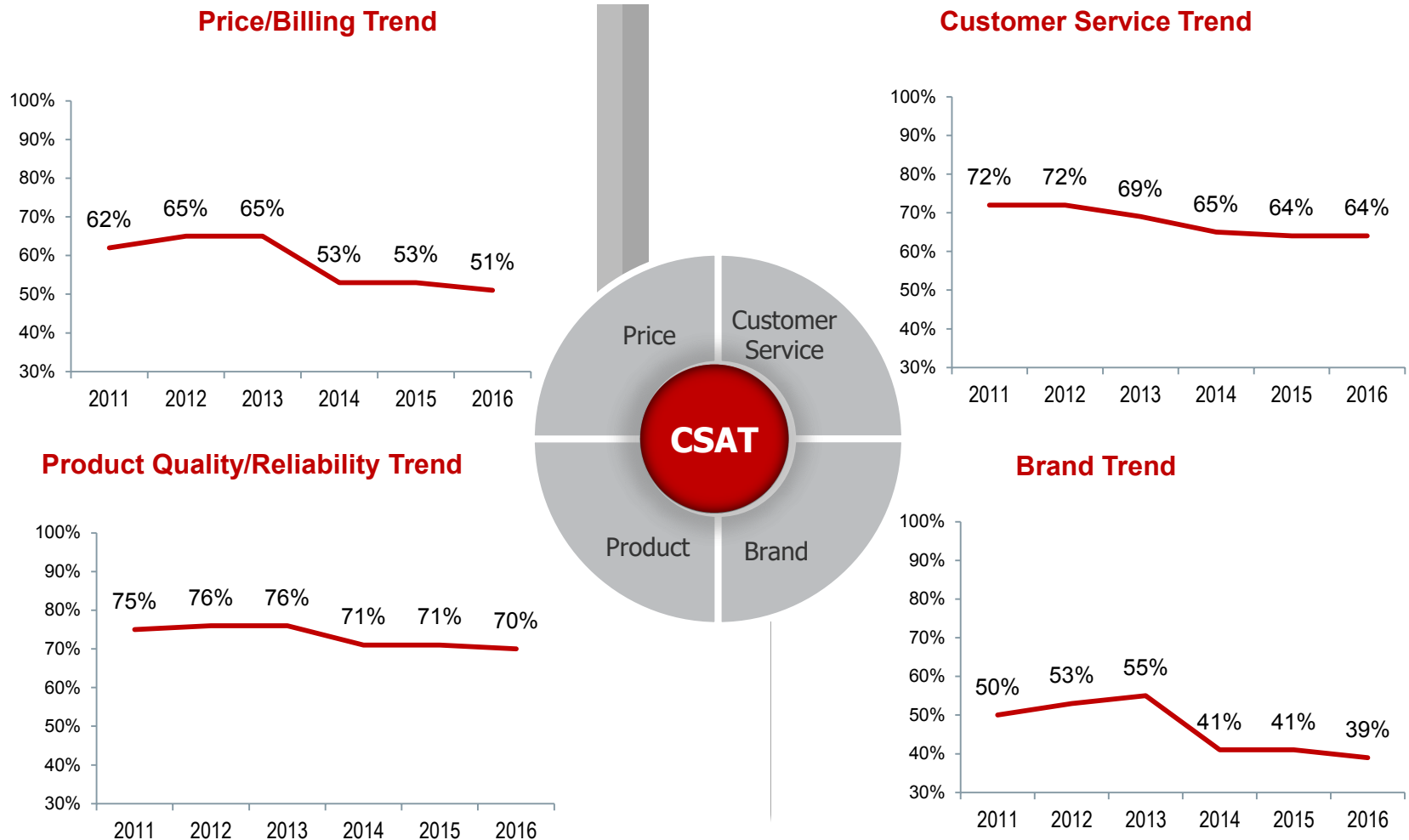


Key Insights

- 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.

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.



1 **TRACKING ACTUALS**

2 If Hydro One completes 8 units at a cost of \$92 per unit:

3 Productivity Savings: $(100-92)*8= \$64$

4 In this scenario Hydro One would report Actual Savings of \$64 against a budget of \$200
5 which represents a shortfall of \$136

6
7 If Hydro One completed 8 units at a cost of \$80 per unit:

8 Productivity Savings: $(100-80)*8=\$160$

9 In this scenario Hydro One would report Actual Savings of \$160 against a budget of \$200
10 which represents a shortfall of \$40

11
12 If Hydro One completed 10 units at a cost of \$80 per unit:

13 Productivity Savings: $(100-80)*10=\$200$

14 In this scenario Hydro One would report Actual savings of \$200 against a budget of \$200
15 which represents the amount of savings embedded into the business plan.

16
17 If Hydro One completed 8 units at a cost of \$60 per unit:

18 Productivity Savings: $(100-60)*8=\$320$

19 In this scenario Hydro One would report Actual Savings of \$320 against a budget of \$200
20 which represents excess savings of \$120

21
22 c) Hydro One will provide details in support of any verifiable productivity savings related to the
23 in-service variance account when it applies to clear balances at its next rebasing application.

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

3

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

- 1 b) Please refer to Exhibit I, Tab 18, SEC-29, Electricity Distributor Scorecard.
2
3 c) Hydro One expects to achieve the 2020 allocated target by continuing to deliver the programs
4 that are included in the Conservation and Demand Management Plan.
5
6 d) Hydro One began conducting transactional surveys in 2017 for the Home Assistance
7 Program, Small Business Lighting program, and the Retrofit Program. The surveys assessed
8 overall satisfaction with the program and the customer's experience with each phase of the
9 program.
10
11 e) Hydro One is currently sponsoring a study that is being conducted by McMaster University
12 to quantify these results. A final report has not yet been published.

1 b) The following table shows Hydro One’s conservation and demand management staffing
2 levels and costs in 2017. Almost 100% of costs were recoverable from the IESO. At this
3 time, Hydro One is not planning a material adjustment to staffing levels.
4

| 2017 FTEs | 2017 Staffing Expenditure |
|-----------|---------------------------|
| 116 | \$15M |

5
6 c) Hydro One’s “Get Local” initiative focused on customer education, knowledge, and
7 assistance across several areas of our business, including energy savings. Among the topics
8 discussed with customers, energy conservation was common. However, the team did not
9 specifically track energy savings following the Get Local education/support sessions.
10

11 d) Hydro One does not track the volume of CDM-specific programs that customers sign-up for
12 following the “Get Local” education sessions.
13

14 The following CDM material is shared with customers at “Get Local” education sessions:

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

| 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 | LDC 6 | LDC 7 | LDC 8 | LDC 9 | LDC 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 | |
|--|-----|
| <i>Select the reason(s) for CDM Plan amendment, as per ECA.</i> | |
| 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>I/We have the authority to bind the Corporation.</i> |
| Date (DD-Mon-YYYY) | |

| | |
|--------------------------------|---|
| LDC's Legal Name: | Festival Hydro Inc. |
| Company Representative: | Ysni Semsedini |
| Signature | |
| | <i>I/We have the authority to bind the Corporation.</i> |
| 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) <i>Indicate total CDM Plan Target allocated to LDC(s)</i> | 1,255,340 | 1,220,690.0 | 34,650.0 | | | | | | | | |
| b. CDM Plan MWh Savings <i>Calculated as part of CDM Plan</i> | 1,289,842 | 1,255,125 | 34,717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| c. Allocated LDC CDM Plan Budget (\$) <i>Indicate total budget allocated to LDC</i> | \$347,123,558 | \$338,355,409.00 | \$8,768,149.00 | | | | | | | | |
| d. Total CDM Plan Budget (\$) <i>Calculated as part of CDM Plan</i> | \$347,080,757 | \$338,317,197 | 8,763,560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| f. CDM Plan Cost Effectiveness <i>Indicate annual portfolio-level Cost Effectiveness for CDM Plan as determined by LDC(s) using output from Cost-Effectiveness Tool</i> | | 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 <i>Complete this section if proposed plan <u>does not</u> meet minimum Cost-Effectiveness Thresholds set out in CDM Plan Submission and Review Criteria Rules.</i> | | | | | | | | | | | |

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 | Hydro One will be implementing a Smarth Thermostat 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. | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

| 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 | The proposed Whole Home Program would offer residential customers in home energy audits and incentives towards the installation of energy efficient equipment and home upgrades. The final design of this program will rely on the results of the Provincial Whole Home Pilot. | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

| 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 | 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. | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

| 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 | | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

| 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 | | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

| 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 | | |
| | <i>Provide overview of key objectives and elements of proposed program or pilot.</i> | |

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 | | <i>Use same "Program name" included in other worksheets</i> | |
| 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 | | <i>Use same "Program name" included in other worksheets</i> | |
| 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 | | <i>Use same "Program name" included in other worksheets</i> | |
| 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 | | <i>Use same "Program name" included in other worksheets</i> | |
| 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 | |
|---|---|
| <p>Regional LDC(s) Collaboration <i>Description of how the LDC(s) will collaborate with other LDCs. If collaboration will not occur, description of why it will not occur.</i></p> | <p>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 Agricultural High Efficiency Pumping Program.</p> <p>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.</p> |
| <p>Gas Collaboration <i>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.</i></p> | <p>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.</p> <p>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.</p> |
| <p>CDM Contribution to Regional Planning <i>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 include Integrated Regional Resource Plans or Municipal Community Energy Plans.</i></p> | <p>As per the CDM Requirement Guidelines for Electricity Distributors 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.</p> <p>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.</p> <p>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.</p> |

G. Additional Documentation for CDM Plan (If applicable)

| ADDITIONAL INFORMATION AND DOCUMENTATION | |
|--|--|
| <p>Programs Opportunity to provide any additional information on assumptions used for budgets and/or savings for approved 2015-2020 province-wide programs</p> | <p>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.</p> |
| <p>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</p> | <p>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.</p> |
| <p>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</p> | <p>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.</p> |
| <p>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</p> | <p>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.</p> |
| <p>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</p> | <p>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).</p> |
| <p>Other Additional assumptions used in the CDM Plan</p> | |

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 # 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.)

1 **Response:**

2 a) Hydro One considered various methods to incorporate and reflect the four outcomes
3 identified in the Rate Handbook, that align with achieving Hydro One Business Objectives
4 and the four Renewed Regulatory Framework Performance Outcomes as described in Exhibit
5 B1-1-1 DSP Section 1.1 and Exhibit B1-1-1, DSP Section 1.4 (5.2.3 A and B) Methods and
6 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

| RRF Outcomes | Measure | Historical Results | | | | | | Target | | | | |
|--|--|---|---|---------|-------------|---------|---------|---------|---------|-------|-------|-----|
| | | 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 | 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 | 9.1 | 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?

1 c) What are the most significant asset failure modes captured in the “Number of Line
2 Equipment Caused Interruptions” category? What are the typical triggering causes of these
3 failures (e.g.: high winds, snow load, extreme heat, spontaneous failure, etc.)?
4

5 **Response:**

6 a) Based on Hydro One’s satisfaction surveys and research, the following issues resulted in the
7 decline in customer satisfaction between 2014 and 2016: billing accuracy, lack of trust, rates
8 charged, and fairness of charges. The Electricity Price Index increased substantially since
9 2013, resulting in a decline in customer satisfaction.
10

11 b) Quality and reliability are considered when measuring customer satisfaction with Hydro One.
12 As an example, the Hydro One’s Customer Engagement analyzed the correlation between
13 outages and reliability with customer satisfaction (as per Exhibit B1, Tab 1, Schedule 1,
14 Attachment 1).
15

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

1 **Association of Major Power Consumers in Ontario Interrogatory # 3**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01
9 Electricity Distributor Scorecard

10
11 **Interrogatory:**

- 12 a) Page 8 Figure 2: Please provide any changes to the Rate Application Five-Year Targets
13 resulting from the release of the 2016 Electricity Distribution Scorecard and evidence
14 updates.
- 15
16 b) Please provide any internal or consultant reports in the past 5 years related to the review of
17 Hydro One's system reliability.
- 18
19 c) Page 33: Please provide copies of any reports resulting from Hydro One's participation in
20 surveys or studies related to its system reliability in the past 5 years.

21
22 **Response:**

- 23 a) Refer to Interrogatory Exhibit I-18-SEC-029.
- 24
25 b) & c) Please refer to Exhibit I-3-SEC-003.

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 | <ul style="list-style-type: none"> 0.3k outages/year 0.4k customers/outage 5 hours/outage | 6% | 0.5 | 12% | 10% | (18)% | 7% |
| Stations | <ul style="list-style-type: none"> 0.1k outages/year 0.9k customers/outage 3 hours/outage | 2% | 0.2 | 14% | 5% | (4)% | 0% |
| Other Line Components | <ul style="list-style-type: none"> 7k outages/year 0.1k customers/outage 3 hours/outage | 22% | 1.6 | 10% | 0% | (10)% | (5)% |
| Vegetation | <ul style="list-style-type: none"> 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 majeure 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 | <ul style="list-style-type: none"> • 0.3k outages/year • 0.4k customers/outage • 5 hours/outage | 6% | 0.4 | 12% | 10% | (18)% | 7% |
| Stations | <ul style="list-style-type: none"> • 0.1k outages/year • 0.9k customers/outage • 3 hours/outage | 2% | 0.2 | 14% | 5% | (4)% | 0% |
| Other Line Components | <ul style="list-style-type: none"> • 7k outages/year • 0.1k customers/outage • 3 hours/outage | 21% | 1.6 | 10% | 0% | (10)% | (5)% |
| Vegetation | <ul style="list-style-type: none"> • 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 majeure 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"

1

1 **Energy Probe Research Foundation Interrogatory # 18**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 8

9
10 **Interrogatory:**

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

13
14 b) Please update these figures with 2016 and 2017 (if possible) results.

15
16 **Response:**

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

21
22 b) Please refer to Exhibit I, Tab 18, SEC-29.

1 **Energy Probe Research Foundation Interrogatory # 19**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 35-37

9
10 **Interrogatory:**

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

12
13 **Response:**

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

1 **Energy Probe Research Foundation Interrogatory # 20**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 39-41

9
10 **Interrogatory:**

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

12
13 **Response:**

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

- 1 • For the Electricity Distributor Scorecard, consistent with the evidence filed, Hydro One
2 cannot provide targets for the measures in the Financial Ratios Performance Category or
3 measures which are reported by third-parties¹.
4
5 • For the Dx OEB Scorecard, consistent with the evidence filed, and due to the
6 denominator variable for OM&A Dollars per Customer and OM&A Dollars per km of
7 Line, Hydro One cannot provide targets for 2018 to 2022. Please refer to Exhibit Q, Tab
8 1, Schedule 1, Attachment 1, p 16 for the OM&A budget for 2018 to 2022.
9
10 • 2017 results for measures in the Financial Ratios Performance Category of the Electricity
11 Distributor Scorecard or in the Cost Control category of the Dx OEB Scorecards cannot
12 be provided at this time.
13
14 • Targets for System Reliability Measures in the Dx OEB Scorecard beyond 2018 have not
15 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 | | | | | | | TARGETS | | | | | |
|---|---------------------------------------|---|---------|--------|--------------|---------|---------|---------|-----------|---------|--------|--------|--------|-------------------|-------|
| | | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 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% |
| | Customer Satisfaction | 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% |
| | | 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% | 84.90% | 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 | |
| | | Level of Compliance with Ontario Regulation 22/04 ¹ | NI | NI | NI | NI | C | NI | TBD | C | C | C | C | C | |
| | System Reliability** | Serious Electrical Incident Index | 8 | 6 | 7 | 4 | 5 | 11 | TBD | N/A | N/A | N/A | N/A | N/A | |
| | | 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 | |
| | Asset Management | 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 | |
| | | 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 | |
| | Cost Control | Distribution System Plan Implementation Progress* | | | Under Review | 97% | 116% | 105% | TBD | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| Efficiency Assessment | | | 5 | 5 | 5 | 5 | 4 | TBD | 5 | 5 | 5 | 5 | 5 | | |
| 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 | |
| | | 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% | |
| Financial Performance Financial viability is maintained, and savings from operational effectiveness are sustainable. | Financial Ratios | 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% | |
| | | 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 | |
| | | 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 | |
| | | Profitability: Regulatory Return on Equity | | 9.66% | 9.66% | 9.66% | 9.66% | 9.30% | 9.19% | TBD | 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 | | |

Notes:

- Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
 - 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.
 - 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.
 - 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.

1

Dx OEB Scorecard

| RRFE Outcomes | | Measure | Historical Results | | | | | | Actual | Target | | | | | | |
|---------------------------|-----------------------|--|--|---------|-------------|---------|---------|---------|---------|-------------|---------|---------|---------|---------|---------|---------|
| | | | 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.

2

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 |

1 Line Equipment caused interruptions did not achieve the target because there were more
 2 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 |

4 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 |

7 The Number of Pole Top Transformers with PCB Oil did not meet 2015 and 2016 targets
 8 primarily due to a redirection of funding that lead to reduced testing and thus contaminated units
 9 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 |

12 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 |

15 Handling of Unplanned Outages Satisfaction (%) did not meet targets primarily due to reliable
 16 supply, number of outages, duration of outages, and communication with respect to estimated
 17 restoration times. Hydro One continues to employ methods to improve communication with
 18

Witness: KIRALY Gregory

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

6

| 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 |

7 *No longer measured, replaced by Bill Accuracy measure.

8
9 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%) | Reliability - Dx (SAIDI) average length of outages in hours that a customer experiences | Hours per Customer |
| | Dx In Service Additions Delivery Accuracy | Variance (%) to approved budget of \$663M |
| | Net Income (30%) | Net Income to Common Shareholders |
| 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 |

1 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] |
| | 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) |
| Productivity | 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 |

2

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

3
4 The Dx OEB scorecard will contain the measures shown in Exhibit I-18-SEC-029.

5
6 Hydro One will use the existing measures on the Electricity Distributor Scorecard, shown in
7 Exhibit I-18-SEC-029, in its reporting, and may omit certain measures which are reported by
8 external third parties or which cannot be reported in interim periods during the year.

9
10 For measures used in the Team Scorecard, please refer to a) above.

11
12 For measures used in the Operational Reporting, please refer to a) above.

13
14 c) The metrics that will be used for the evolved TX scorecard will be presented in the next
15 application for 2019 to 2023.

16
17 For measure definitions and calculations examples for the Dx OEB Scorecard are provided in
18 Exhibit I-18-SEC-029.

19
20 Measures used in the Electricity Distributor Scorecard were set in the OEB's, *Report of the*
21 *Board, Performance Measurement for Electricity Distributors: A Scorecard Approach (EB-*
22 *2010-0379), March 5, 2014. The OEB has allowed electricity distributors flexibility and*
23 *discretion to self-defining a portion of the measures on the Electricity Distributor Scorecard,*
24 *these are:*

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

28
29 For measure definitions and explanations relating to the three self-defined metrics, please
30 refer to Exhibit A, Tab 5, Schedule 1, Electricity Distributor Scorecard.

31
32 Hydro One believes that the measures on the Team Scorecard and the Operational Reporting
33 are either self-explanatory, i.e. Net Income, or are present in the other scorecards with
34 definitions and examples provided in the application references noted above.

1 **Vulnerable Energy Consumers Coalition Interrogatory # 17**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 7

9
10 **Interrogatory:**

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

12
13 **Response:**

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

1 **Vulnerable Energy Consumers Coalition Interrogatory # 18**

2
3 **Issue:**

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

6
7 **Reference:**

8 B1-01-01 Section 1.4

9
10 **Interrogatory:**

- 11 a) Defective equipment is the 2nd largest contributor to outage duration. How does Hydro
12 One's scorecard metrics demonstrate to customers the value added of its capital program in
13 reducing outages due to defective equipment?
- 14
- 15 b) Scheduled outages are the 3rd largest contributor to reliability. What scorecard metric
16 demonstrates Hydro One's ability to minimize schedule outages and their duration?

17
18 **Response:**

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

1 **Vulnerable Energy Consumers Coalition Interrogatory # 19**

2
3 **Issue:**

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

6
7 **Reference:**

8 None

9
10 **Interrogatory:**

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

15
16 **Response:**

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

21
22 Based on the guidance in the Handbook, it is clear that scorecard measures are used to inform
23 the OEB's review of an application but rates are ultimately set on the basis of a forecast of a
24 utility's costs.

1 **Association of Major Power Consumers in Ontario Interrogatory # 12**

2
3 **Issue:**

4 Issue 19: Are the proposals for performance monitoring and reporting adequate and do the
5 outcomes adequately reflect customer expectations?
6

7 **Reference:**

8 B1-01-01 Section 1.4 Page: 3 - Table 8 Distribution OEB Scorecard
9

10 **Interrogatory:**

- 11 a) Please update Table 8 to reflect 2017 actuals and any other evidence updates.
12 b) Please provide the calculation that underpins the 2011 to 2018 data for the following
13 measures: pole replacement Gross Cost per Unit (\$); Station Refurbishments Gross Cost per
14 MVA (\$).
15 c) Vegetation Management Measure: please provide the historical unit costs prior to the
16 development of a new program.
17 d) Please provide the calculation for the most current Vegetation Management targets in 2017
18 and 2018.
19 e) Please provide the subset of asset outages that make up the total number of Line Equipment
20 Caused Interruptions, i.e. provide the number of outages caused by each sub-equipment
21 component for each of the years 2011 to 2017.
22 f) Does Vegetation Caused Interruption mean the same thing as Tree Contacts. If not please
23 provide the inputs to the total number of Vegetation caused interruptions for the years 2011
24 to 2017, i.e. provide the type of vegetation caused outages on line equipment and the number
25 of interruptions for each.
26 g) Does Vegetation Caused outages include vegetation outages during storm events that are not
27 classified as Force Majeure events?
28 h) Please provide the subset of asset outages that make up the total number of Substation
29 Caused Interruptions, i.e. provide the number of outages caused by each sub-equipment
30 component for each of the years 2011 to 2017.
31 i) Please explain why Hydro One adjustments to the Vegetation Management program make
32 year over year unit cost comparisons impossible.
33

34 **Response:**

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

- 1 b) The calculations that underpins the data for Pole Replacement Gross Cost per Unit (\$) and
2 Station Refurbishment Gross Cost per MVA (\$) are provided in Exhibit B1, Tab 1, Schedule
3 1, DSP Section 1.4.1 (5.2.3 A and B) Methods and Measures, pp.6-7.
4
- 5 c) Please refer to Exhibit I-18-SEC-030.
6
- 7 d) The gross cyclical unit cost measure is based on the \$3,000/km cost calculated by Clear Path
8 in Exhibit Q, Tab 1, Schedule 1, Attachment 2, Section 5.2 Cost Modeling. The Clear Path
9 estimate was increased by Hydro One by \$600 to reflect the increased travel time between
10 defects compared to historical programs, an increase in job planning costs to support the
11 detailed workload data, and the expected transition costs outlined in Exhibit I-10-CME-027.
12
- 13 e) Hydro One does not report customer interruptions to the level of granularity required for
14 equipment subcomponent failures.
15
- 16 f) Yes.
17
- 18 g) Specifically for Table 8 – Yes.
19
- 20 h) Hydro One does not report customer interruptions to the level of granularity required for
21 equipment subcomponent failures.
22
- 23 i) Comparisons between the vegetation management strategy used up to 2016 and the new
24 strategy outlined in Exhibit Q, Tab 1, Schedule 1 are possible. However, there are significant
25 differences in the scope of work which account for the differences in unit prices.
26 Comparisons are provided in attachment 4, Exhibit I-3-SEC-004, Hydro One Board Memo
27 on the Optimal Cycle Protocol, Table 2 and Exhibit Q, Tab 1, Schedule 1, Attachment 2,
28 Section 1.4 Forecast Workload and Cost.

1 **Association of Major Power Consumers in Ontario Interrogatory # 14**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

- 11 a) Page 4: Please provide the Team Scorecard for 2016, 2017 and 2018.
12
13 b) Page 4: Please discuss the operational reporting that is done on a monthly basis by
14 Operations Managers.

15
16 **Response:**

- 17 a) For the Team Scorecards for up to 2017, please refer to Exhibit I- 3-SEC-002. For the 2018
18 Team Scorecard, please refer to Exhibit I-40-CME-034, part b).
19
20 b) Please refer to Exhibit I-18-Staff-067. The Operations leadership team meets monthly to
21 review all metrics on the Team and Operations Scorecards, reviewing performance impacts
22 and projections for the year.

1 **Building Owners and Managers Association Toronto Interrogatory # 18**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-03-01 Page: 14

9
10 **Interrogatory:**

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

13
14 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 19**

2
3 **Issue:**

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

6
7 Issue 23: Was the customer consultation adequate and does the Distribution System Plan
8 adequately address customer needs and preferences?

9 **Reference:**

10 A-03-01 Page: 15

11
12 **Interrogatory:**

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

- 14
- 15 a) What are the accumulate rate increases over 2017 rates for the period 2018 to 2022,
16 inclusive, on both an arithmetic and compounded basis?
 - 17
 - 18 b) What is the actual annual rate increase for each year from 2019, 2020, 2021, 2022, on both
19 an arithmetic and compounded basis?
 - 20
 - 21 c) Why did Hydro One not include an option that would maintain reliability, but not increase it?
 - 22
 - 23 d) Why do the percentage contributions to SAIDI total only 57%? Please provide more details
24 on rate of "other line components" in Table 4.
 - 25
 - 26 e) Please explain what the "regulatory obligations" referred to are. Please specify.
 - 27
 - 28 f) Please confirm that B (modified) would maintain, but not increase reliability.
 - 29
 - 30 g) Please provide the reduction in capital spending earned by each of the four measures listed
31 below Table 5.
 - 32
 - 33 h) Please provide a calculation which underpin the statement that the forecast reduced load in
34 2018 relative to 2017 contributes 3.0% of the average increase in distribution rates of 4.9% in
35 2018 relative to 2017. Please take into account both the forecast decrease in 0.6% in load
36 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% |
| <i>See note in response (a)</i> | | | | |

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% |
| <i>See note in response (a)</i> | | | | |

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

6
7 *Hydro One has stated that it is in the fourth quartile of North American utility*
8 *performance with respect to system reliability and that it has no plan to improve on that*
9 *score. It submits that to do so would not be cost effective and its customers would not*
10 *want to pay the cost associated with the improvements. **The OEB considers Hydro One's***
11 ***stance on its performance to be misplaced.** Rather than argue that it would be too*
12 *expensive to move up the ladder in comparison to those that are in the first, second and*
13 *third quartile, **Hydro One should be finding cost effective ways to improve its***
14 ***performance...***

15
16 d) Only the SAIDI contribution attributed to equipment and vegetation caused outages was
17 included; other outage contributors include adverse environment, scheduled, foreign
18 interference, human element, and unknown/other. Other line components include non-pole
19 assets on distribution lines such as conductors and cross arms.

20
21 e) For each plan option, Hydro One assumed that it would fulfil its regulatory obligations,
22 including but not limited to:

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

28
29 f) Confirmed. At the time of filing this Application, Plan B (modified) aimed to maintain, but
30 not increase system-wide reliability.

31
32 g) Please refer to Exhibit I-7-CCC-11

33
34 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 |

- 1
2 i) Benchmarking evidence suggests that utilities with shorter cycles have better reliability
3 performance. Therefore, by shortening the vegetation management cycle, Hydro One will be
4 better aligning its program management strategies with the goal of improving tree-related
5 reliability. The vegetation management forecast for the 2018 test year (Table 1 in Exhibit C1,
6 Tab 1, Schedule 2) is below the 2017 OEB-approved budget. Thus, there are no vegetation
7 management cost increases compared to the budget approved in EB-2013-0416/EB-2014-
8 0247.

1 **Building Owners and Managers Association Toronto Interrogatory # 20**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-03-01 Page: 16 Table 4

9
10 **Interrogatory:**

11 How is FM defined?

12
13 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 38**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

13
14 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 47**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

13
14 **Response:**

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

16
17 Hydro One does not have a model referred to as a “feeder optimization model”.

1 **Building Owners and Managers Association Toronto Interrogatory # 57**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

12
13 **Response:**

14 Yes, this work has been completed.

1 **Building Owners and Managers Association Toronto Interrogatory # 58**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-03-01-04 Page: 8

9
10 **Interrogatory:**

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

13
14 **Response:**

15 Hydro One has reduced the number of spare transformer standards from 62 down to 48. For the
16 14 categories that Hydro One has eliminated, there are still in-service transformers in the system.
17 The in-service transformers in these categories either have an on-site spare transformer at the
18 station, or can be replaced with a standard transformer, or have plans in place to voltage convert
19 and remove these transformers from service in the future. As a result, spare transformers do not
20 need to be retained in inventory for these categories.

21
22 The spare transformers that Hydro One previously retained in inventory related to these 14
23 categories had an estimated book value of \$0.4 million. These spare transformers have been
24 deployed, and the \$0.4 million has been saved through reduction of inventory carrying costs. If
25 Hydro One was to continue supporting these standards and purchase one spare transformer for
26 each of the 14 spare categories that were eliminated, the cost of the additional spares is estimated
27 to be \$4.3 million. Therefore, Hydro One has saved at least \$0.4 million and potentially an
28 additional \$4.3 million through the elimination of the 14 categories.

1 **Building Owners and Managers Association Toronto Interrogatory # 59**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-03-01-04 Page: 8

9
10 **Interrogatory:**

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

14
15 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 75**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 31

9
10 **Interrogatory:**

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

16
17 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 76**

2
3 **Issue:**

4 Issue 19: Are the proposals for performance monitoring and reporting adequate and do the
5 outcomes adequately reflect customer expectations?
6

7 **Reference:**

8 A-05-01 Page: 33-35
9

10 **Interrogatory:**

11 What about other rural utilities? How does Hydro One SAID compare with other SAIDI number
12 MEDs in calculating its average SAIDI? If it excluded MEDs, what would the record and
13 forecasts be? Please confirm that West Coast Energy Inc. would be considered a rural system
14 density and rural utilities.
15

16 **Response:**

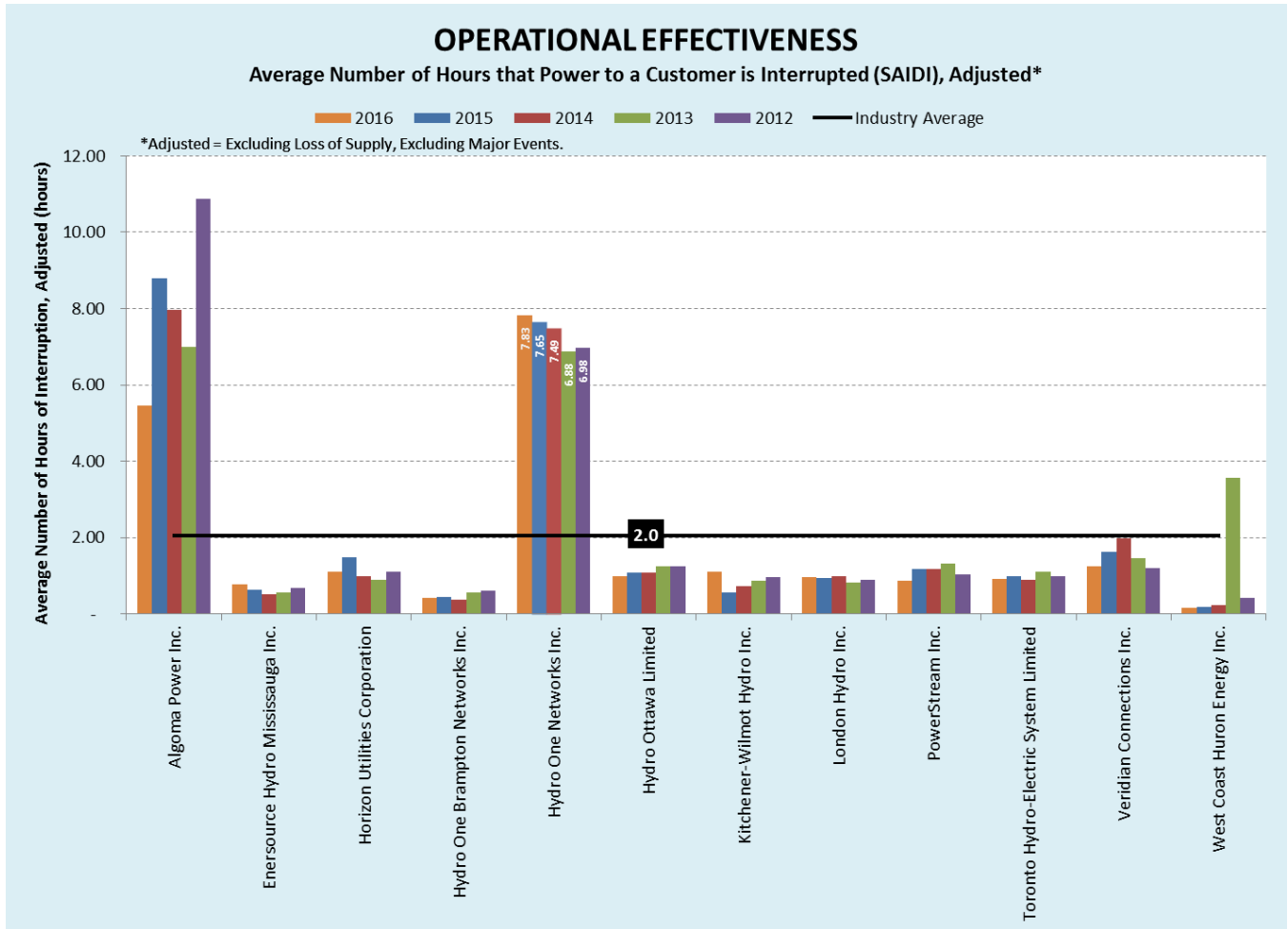
17 In Exhibit A, Tab 5, Schedule 1, Section 2 Electricity Distributor Scorecard: Comparator
18 Selection, Hydro One describes in detail, the methodology used to select the industry peers and
19 to define the Industry Average metric (ibid, p.3). Peer selection was based on four methods
20 (ibid, p.4, Table 1): 1) PEG stretch factor assignments, 2) top-ten by customer count using the
21 OEB Yearbook, 3) top-ten by gross PP&E using the OEB Yearbook, and 4) CLD members.
22 Hydro One did not use or attempt to identify which utilities are considered rural in its comparator
23 selection process.
24

25 Figure 13 on p.35 of Exhibit A, Tab 5, Schedule 1 illustrates Hydro One's SAIDI (including
26 Major Events, excluding Loss of Supply), compared to the industry peers from Table 1 referred
27 to above. The Hydro One average SAIDI over the 2010 to 2015 period (including Major Events,
28 excluding Loss of Supply) was 15.99 hours – the industry average over the same period was 4.3
29 hours. In calculating the industry average of 4.3 hours, Hydro One elected to omit the 2011
30 SAIDI results for West Coast Huron Energy Inc., considering the 49.41 hours to be an outlier.
31

32 Using the most recent Electricity Utility Scorecards¹, Hydro One has revised the SAIDI chart
33 below. Excluding Major Events and excluding Loss of Supply, Hydro One's average SAIDI for
34 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>

1



2

3

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

11

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

Witness: KIRALY Gregory

1 **Building Owners and Managers Association Toronto Interrogatory # 77**

2
3 **Issue:**

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

6
7 **Reference:**

8 2016 Sector-Wide Consolidated Scorecards of Electricity Distributors

9
10 **Interrogatory:**

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

14
15 **Response:**

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

20
21 Hydro One maintains an internal target of C, or Compliant and expects to achieve this through
22 enforcing established processes to ensure full compliance with Regulation 22/04. Internal quality
23 assurance audits, combined with due diligence inspections are also being implemented and will
24 create opportunities for continuous improvement.

25
26 For additional details, please refer to Exhibit A, Tab 5, Schedule 1, pp. 28-29.

1 **Building Owners and Managers Association Toronto Interrogatory # 114**

2
3 **Issue:**

4 Issue 19: Are the proposals for performance monitoring and reporting adequate and do the
5 outcomes adequately reflect customer expectations?
6

7 **Reference:**

8 Exhibit B, Tab 1, Schedule 1, Attachment 1 Page: 135
9

10 **Interrogatory:**

11 Why are interruptions of less than one minute are not leaving recorded tracked by Hydro One, at
12 least for large customers? Record fluctuations, surges, and spikes? Back-up power – Does
13 Hydro One have a power quality plan?
14

15 **Response:**

16 Interruptions of less than a minute are not tracked by Hydro One because the system itself was
17 not designed or built capture momentary outages.
18

19 The phrase “Record fluctuations, surges, and spikes?” poses no question.
20

21 Hydro One uses a two-pronged approach to Power Quality identification:
22

- 23 1) **Proactive Monitoring:** By installing Power Quality measuring devices at strategic points
24 in the system (i.e. supply stations and critical customer locations).
25

26 Data from these devices is available for use in detecting power quality issues. These
27 devices are being installed system wide over the coming years, and are already available
28 in certain areas to allow power quality issues to be identified and resolved. See DSP
29 Section 1.1, page 8 for further details.
30

- 31 2) **Reactive Monitoring:** When undetected Power Quality events occur, Hydro One
32 deploys special power quality meters to help investigate the root cause of power quality
33 disturbances.
34

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

1 **Building Owners and Managers Association Toronto Interrogatory # 116**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

14
15 **Response:**

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

1 **Energy Probe Research Foundation Interrogatory # 22**

2
3 **Issue:**

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

6
7 **Reference:**

8 A-05-01 Page: 5 Table 2

9
10 **Interrogatory:**

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

12
13 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 21**

2
3 **Issue:**

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

7
8 **Reference:**

9 A-03-01 Page: 21

10
11 **Interrogatory:**

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

16
17 **Response:**

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

21
22 The stretch factor is based on a 3-year average difference from benchmark total cost. As
23 indicated on page 6, of the PSE Total Cost Benchmarking study (Exhibit A, Tab 3, Schedule 2,
24 Attachment 2), the additional year of actual data moved the 3-year average to less than the 25%
25 threshold established by the OEB in EB-2010-0379. Table 3-2 of the report shows that Hydro
26 One's cost performance had already been trending positively in 2015. The stretch factor
27 recommendation was updated to 0.45% based on past performance and is consistent with OEB
28 policy.

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 |

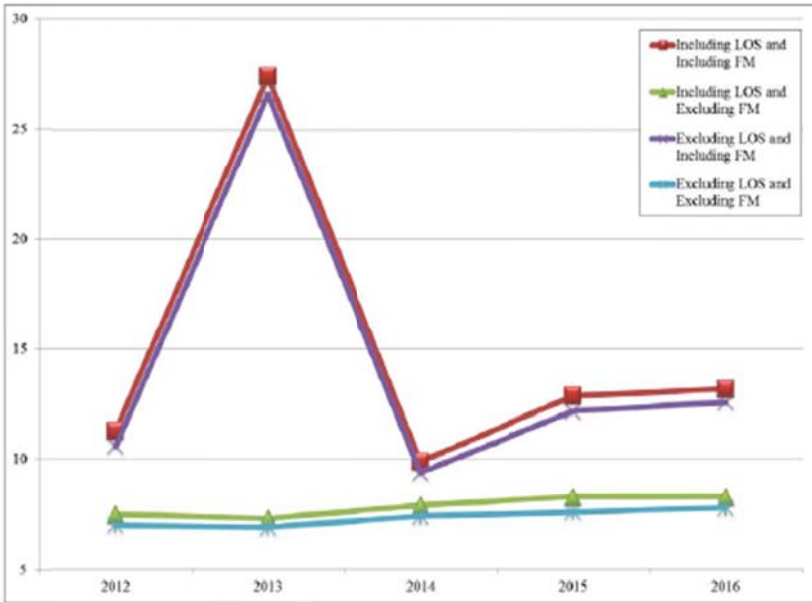


Figure 3 - Chart of Historical SAIDI

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 |

1
2



Figure 4 - Chart of Historical SAIFI

3
4
5
6
7
8
9
10
11
12
13
14
15

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?

1 **Response:**

2 a) The correct interpretation of Figure 4 is that, when Loss of Supply and Force Majeure
3 outages are excluded, SAIFI, which is the average number of interruptions per customer
4 served per year, stays relatively constant. SAIFI is a ratio of the number of customers
5 impacted by outages in a given year to the customers served. Therefore, SAIFI is not
6 representative of the frequency of the number of outages alone, and it is incorrect to conclude
7 that the frequency of outages is not increasing simply because SAIFI is not increasing.
8

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

9
10 b) An increased level of weather and vegetation related events, requiring restoration efforts
11 from Forestry and Lines, resulting in longer restoration times. The majority of the longer
12 duration outages are in remote areas which are difficult to access.
13

14 Hydro One is committed to improving our restoration times and the Company completed a
15 pilot trial of remote sectionalization in the Owen Sound area, which improved reliability in a
16 measurable way. In recent outages on upgraded feeders the combination of the Distribution
17 Management System and its fault location capability along with remote sectionalization
18 reduced outage times by about 50%. The Company is looking to expand that approach, by
19 installing remote sectionalization in areas where it would prove to be a cost effective
20 reliability improvement investment, and leveraging smart meters to locate outages more
21 accurately, by intelligently pinging meters and examining the meter's real-time power outage
22 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

| RRF Outcomes | | Measure | Historical Results | | | | | Target | | |
|--------------------------------------|--|--|--------------------|-------------|-------------|---------|---------|---------|---------|-------|
| | | | 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 |
| <i>Includes outages due to Loss of Supply and Force Majeure</i> | | | | | |

1
2
3 **Interrogatory:**

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

7
8 b) Does "Defective Equipment" as shown in Table 13 solely account for outages caused by
9 spontaneous/autonomous equipment failure, or does it also include outages where an external
10 trigger initiated the equipment failure, e.g.: ice, snow and wind loads, lightning strikes? If
11 the latter case, is it possible to report separately on these two categories and provide a
12 breakdown of causes?

13
14 **Response:**

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

19
20 b) The "Defective Equipment" as shown in Table 13 accounts for outages caused by
21 spontaneous/autonomous equipment failure as well as outages where an external trigger
22 initiated the equipment failure. The data set does not have the level of granularity to report
23 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 |
| <i>Includes outages due to Loss of Supply and Force Majeure</i> | | | | | |

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?

1 **Response:**

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

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

6
7 **Foreign Interference** - Hydro One has some, but not absolute, control over Foreign
8 Interference outage causes. Depending on the type of interference, Hydro One may not have
9 absolute control over outages caused by external factors such as Motor Vehicle Accidents
10 (MVAs).

11
12 **Human Element** - Hydro One has some, but not absolute, control over Human Element.
13 Outage causes such as Public and Third Party Equipment outage causes may not be in Hydro
14 One's control.

15
16 **Loss of Supply** - Hydro One has some, but not absolute, control over Loss of Supply (LOS).
17 Some factors that can cause LOS outage may include, but not limited to, FM and external
18 interference that caused transmission outage that are out of Hydro One's control

19
20 **Scheduled** - Hydro One has control over Scheduled outages causes.

21
22 **Tree Contacts** - Hydro One has some, but not absolute, control over Tree Contacts outage
23 causes depending upon available resources and if adverse environment conditions are
24 present.

25
26 **Unknown/Other** - Hydro One does not have control over Unknown/Other outage causes.

27
28 b) The numbers in the above table do not represent a significant negative trend in the frequency
29 of Tree Contacts and Foreign Interference caused outages. The projects and programs that
30 impact the frequency of Tree Contact outages and Foreign Interference outages are as
31 follows:

32
33 Tree Contacts - Capital expenditures that address the frequency of tree contact outages are
34 those that reduce the exposure of lines to vegetation via relocation from heavily forested off
35 road locations to roadside allowance, or that improve the ability to sectionalize the system.
36 Projects of this type are identified in ISDs SR-12 (Distribution Lines Sustainment Initiatives)

Witness:

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

3
4 Foreign Interference - Expenditures that address the frequency of foreign interference
5 outages are primarily those that reduce exposure of the system to wildlife. These include the
6 capital Nest Platform component of the component replacement program and installing
7 Animal cover-up at stations with a high number of animal contacts through the Stations
8 OM&A Demand and Planned Corrective Maintenance program.

9
10 c) The SAIFI impact of outages classified as “Defective Equipment” is not significantly
11 trending downwards. The relatively flat contribution to SAIFI of equipment outages does not
12 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 Majeure

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

- 1 ii. Are ongoing Hydro One Smart Grid investments expected to ultimately reduce the
2 number of outages with unknown causes?
3

4 **Response:**

5 a) Please refer to Exhibit I-20-Staff-070, a).
6

7 b) Human Element outage causes constitute Dispatch Error/Employee Error, Employee
8 Error/Set Pole, Employee Error/Switching, and Error/Third Party Equipment.
9

10 c) As outlined in EB-2017-0049 Exhibit Q, Tab 1, Schedule 1, p.13, Hydro One has moved to a
11 defect correction program which is expected to improve tree related CAIDI by ensuring that
12 one third of Hydro One's distribution network (34,666 km) will be patrolled yearly to
13 identify and correct vegetation defects. .
14

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

19 d)

20 i. Unknown outages are outages where the field crew have arrived on site and were
21 unable to find any physical damage to the assets. After patrolling the line, they reset
22 the faulted protective device (i.e. recloser, fuse) to restore power. The cause of these
23 outages could be any number of issues (e.g. tree contract, animal contact, weather
24 (lightning/ice), material failure, etc.). Many of the grid modernization investments
25 planned will result in smaller or shorter outages for these Unknown outages.
26

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

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

- 3
- 4 ○ Northern Region = Zone 6 and 7
 - 5 ○ Central Region = Zone 3a and 5
 - 6 ○ Eastern Region = Zone 3b and 4
 - 7 ○ Southern Region = Zone 1 and 2
- 8
- 9 ● 63 Work Centers
 - 10 ● 7 Field Business Centers; red dots on the attached image (Thunder Bay consolidated
11 into Sudbury in Q4 2017)
- 12

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

21

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

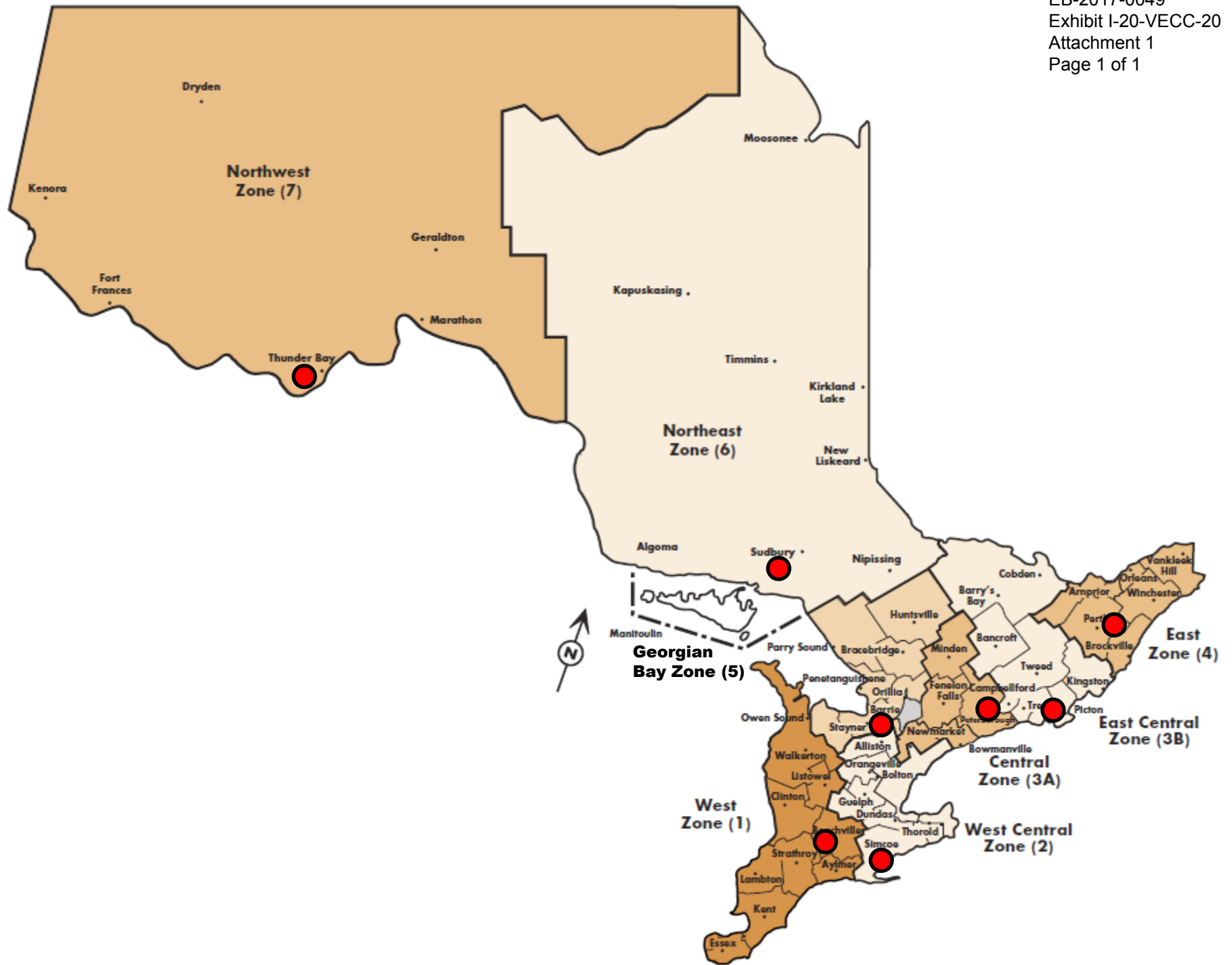
25

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

29

- 30 ● Work Management has 4 divisions each with a Manger; Program Management,
31 Design Services, Field Business Centers, Reporting and Metrics.
- 32
- 33 ● Quality Assurance and Business Support has 3 divisions each with a Manager;
34 Mergers and Acquisitions Integration, Sustainment and Continuous Improvement,
35 Quality Assurance

- 1 c)
- 2 i. Operating regions do not provide any SAIDI and SAIFI reports.
- 3 ii. No.
- 4 iii. No.



1 **Association of Major Power Consumers in Ontario Interrogatory # 15**

2
3 **Issue:**

4 Issue 21: Does the application adequately account for productivity gains in its forecasts and
5 adequately include expectations for gains relative to external benchmarks?
6

7 **Reference:**

8 B1-01-01 Section 1.5 Page: 2-5
9

10 **Interrogatory:**

- 11 a) Page 2 Table 17: Please confirm the savings in Table 17 are incremental savings.
12
13 b) Page 2 Table 17: Please update Table 17 to reflect the December 21, 2017 update (Hydro
14 One 2018 -2023 Distribution Business Plan Page 17).
15
16 c) Page 4: Please confirm the Move to Mobile initiative was successfully implemented in April
17 2017.
18
19 d) Page 4: Please provide an update on expansion of the Move to Mobile project to Provincial
20 Lines and Forestry Services. If expanded over the test period, is there potential for additional
21 savings in 2018 to 2022.
22
23 e) Page 5: Please provide the number of cable locates and cable locate costs for the years 2012
24 to 2022.
25

26 **Response:**

- 27 a) Hydro One's productivity plan was reset in 2015 and the associated governance was
28 enhanced at the time of application. Only forward looking initiatives with a direct impact to
29 costs were included in the forward looking plan.
30
31 b) Please refer to Exhibit I-25-Staff-123 for the updated Table.
32
33 c) Confirmed.
34
35 d) Hydro One is still assessing the business requirements for a mobile platform in forestry. We
36 anticipate implementation by end of year 2018. We are not anticipating any additional cost
37 savings within our forestry transformation other than the associated long term cost savings.

Witness: LOPEZ Chris

1
2 e) Below are the number of cable locates and cable locate costs for the years 2012 to 2022

3

| | 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 |

4

Witness: LOPEZ Chris

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

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%)

- 1 c) The Move to Mobile solution will reduce manual data entry requirements and provide
- 2 savings opportunities in administrative field support. Expected OM&A savings were derived
- 3 by evaluating positions that will be redundant in field support once Move to Mobile is
- 4 optimized. 29 positions were identified. Savings are expected to materialize through attrition
- 5 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

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

3
4 Prior to operationalizing these enhancements, Hydro One is completing detailed assessments
5 including pilots with localized implementation to ensure positive results. Once proven, Hydro
6 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).

- 1 c) See Tables 17 and 20 in Exhibit B1, Tab, Schedule 1, Section 1.5 pages 2, 3, 9 and 10.
2
3 d) Hydro One uses feedback rounds as a tool to help ensure it receives the best pricing possible.
4 As this is a competitive process, if the vendors are serious about their chances of being
5 awarded a contract, it would be reasonable that they would submit the best pricing possible
6 taking the feedback they received into consideration.

1 **Building Owners and Managers Association Toronto Interrogatory # 35**

2
3 **Issue:**

4 Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage
5 within the revenue requirement proposed over the course of the custom incentive rate plan term?
6

7 **Reference:**

8 A-03-01-01 Page: 22
9

10 **Interrogatory:**

11 Why does the Load Impact change so much from year to year? Please explain separately each
12 annual variation, positive or negative. Please confirm that the negative market for 2019, 2020,
13 2021, 2022, are the measure of customer growth, shift in rate design and in those years. Please
14 disaggregate the impact of factors causing the number for each year.
15

16 **Response:**

17 Hydro One is providing its response with respect to the load impacts shown on page 21 of the
18 updated business plan provided as Attachment 1 to Exhibit Q-01-01 filed December 17, 2017.
19 The explanations provided below also apply to the original reference in the question (Exhibit A-
20 03-01-01, page 24).
21

22 The Load Impact is driven by the proposed load forecast *relative to* the approved or forecast load
23 in the prior year. The explanations for the changes in each year are provided below:
24

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

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

1 **Building Owners and Managers Association Toronto Interrogatory # 100**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

14
15 **Response:**

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

1 **Building Owners and Managers Association Toronto Interrogatory # 104**

2
3 **Issue:**

4 Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage
5 within the revenue requirement proposed over the course of the custom incentive rate plan term?
6

7 **Reference:**

8 Exhibit B, Tab 1, Schedule 1 Attachment 1 Page: 123
9

10 **Interrogatory:**

11 How has HONI incorporated the need for more rapid power outage restoration into its five-year
12 DSP?
13

14 **Response:**

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

- 17 • SS-06 Worst Performing Feeders
18 • SS-07 Advanced Distribution System ("ADS")
19 • SR-05 Distribution Station Feeder Protection Upgrade
20 • SR-06 Distribution Station Refurbishment
21

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

1 **Building Owners and Managers Association Toronto Interrogatory # 105**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

13
14 **Response:**

15 Confirmed.

1 **Building Owners and Managers Association Toronto Interrogatory # 108**

2
3 **Issue:**

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

6
7 **Reference:**

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

9
10 **Interrogatory:**

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

12
13 **Response:**

14
15 In Exhibit B1, Tab 1, Schedule 1, DSP Section 1.3, Attachment 1: Distribution Customer
16 Engagement Report, p.128, Hydro One asked large customers if they had an expectation of
17 higher or differentiated service. The question was intended to obtain customer feedback to
18 determine if large customers expect a higher or different service than general customers. The
19 next part of the question asked the customer to explain their answer. The purpose of this question
20 was to ascertain what services large customers valued to better understand the needs of this
21 customer segment.

1 **Building Owners and Managers Association Toronto Interrogatory # 122**

2
3 **Issue:**

4 Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage
5 within the revenue requirement proposed over the course of the custom incentive rate plan term?
6

7 **Reference:**

8 Exhibit B, Tab 1, Schedule 1; DSP 2.6 Page 7
9

10 **Interrogatory:**

- 11 a) Please provide a copy of any written strategic directive provided by HONI's senior
12 executives, to inform the planning agenda for the 2017-2022 period.
13
14 b) What is meant by "The forecasts presented are weather-normal at the wholesale level"? (our
15 emphasis)
16

17 **Response:**

- 18 a) There was no written strategic directive provided by HONI's senior executives. For budget
19 guidance, please refer to Exhibit I-3-SEC-001. Please see section 2.1 of the DSP (Exhibit
20 B1, Tab 1, Schedule 1) for the strategic context for the investment planning process.
21
22 b) The forecast of load at the wholesale level predicts the future load measured at the high-side
23 of transformers connecting Hydro One's distribution system to the IESO-controlled grid and,
24 as such, it includes distribution losses. Moreover, the forecast represents the future wholesale
25 load under normal weather conditions.

1 **Building Owners and Managers Association Toronto Interrogatory # 127**

2
3 **Issue:**

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

6
7 **Reference:**

8 B1-01-01 Section 2.2

9
10 **Interrogatory:**

- 11 a) A small part of the distribution system is monitored. What percentage of lines (distance) are
12 monitored, breakers, and switches, for the distribution network?
13
14 b) Are all distribution stations monitored remotely? If not, what percentage are?
15
16 c) What will those percentages be at the end of the five year plan, at the midpoint of the plan?

17
18 **Response:**

- 19 a) On distribution circuits emanating from the transmission system, all feeder breakers are
20 monitored and controlled remotely from the station. On distribution lines, only feeders in the
21 Owen Sound pilot are monitored and controlled (<1%).
22
23 b) For distribution stations, only the stations that were part of the Owen Sound pilot are
24 monitored and controlled (<1%).
25
26 c) By the end of the five year plan about 7% of distribution stations and about 6% of
27 distribution lines will be monitored and controlled. At the mid-point in the plan about 3% of
28 distribution stations and lines will be monitored and controlled.

1 **Building Owners and Managers Association Toronto Interrogatory # 128**

2
3 **Issue:**

4 Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage
5 within the revenue requirement proposed over the course of the custom incentive rate plan term?
6

7 **Reference:**

8 B1-01-01 Section 2.2 Page: 4
9

10 **Interrogatory:**

11 What is the significance of HONI's major events to be force majeure events, operationally, and
12 legally?
13

14 **Response:**

15 The significance of a major event being declared a Force Majeure event (refer to Exhibit I-9-
16 BOMA-002) is an event that is beyond the control of the distributor and is:
17

- 18 a) unforeseeable;
19 b) unpredictable;
20 c) unpreventable; or
21 d) unavoidable.
22

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

1 **Energy Probe Research Foundation Interrogatory # 26**

2
3 **Issue:**

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

6
7 **Reference:**

8 C1-01-02 Page: 17

9
10 **Interrogatory:**

11 Please explain why the “Line Maintenance” programs are repeatedly underspent.

12
13 **Response:**

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

Contact Centre of the Future

August 8th, 2017



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

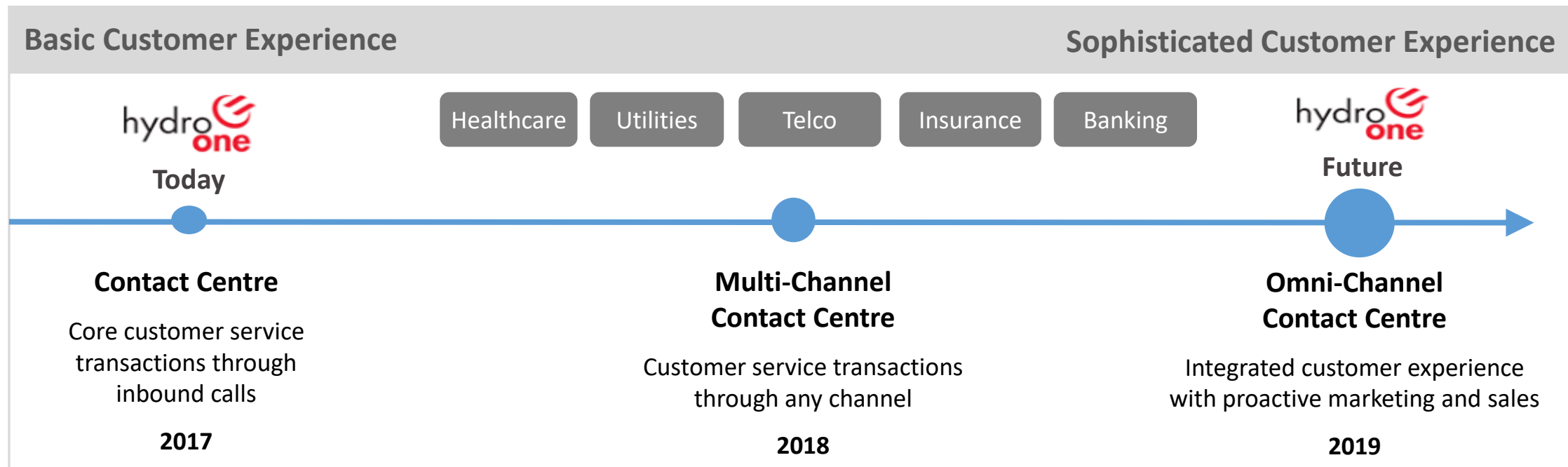
Hydro One evaluated three alternatives for the delivery of services after the expiry of the initial term, which ends February 28, 2018:

| Alternative | Evaluation |
|--|--|
| 1 Extend the Existing Contract with Inergi | <p>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.</p> |
| 2 Retender the Services via a Competitive RFP Process | <p>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.</p> |
| 3 Insource the Contact Centre and Deliver the Services Directly | <p>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.</p> |

Business Objectives

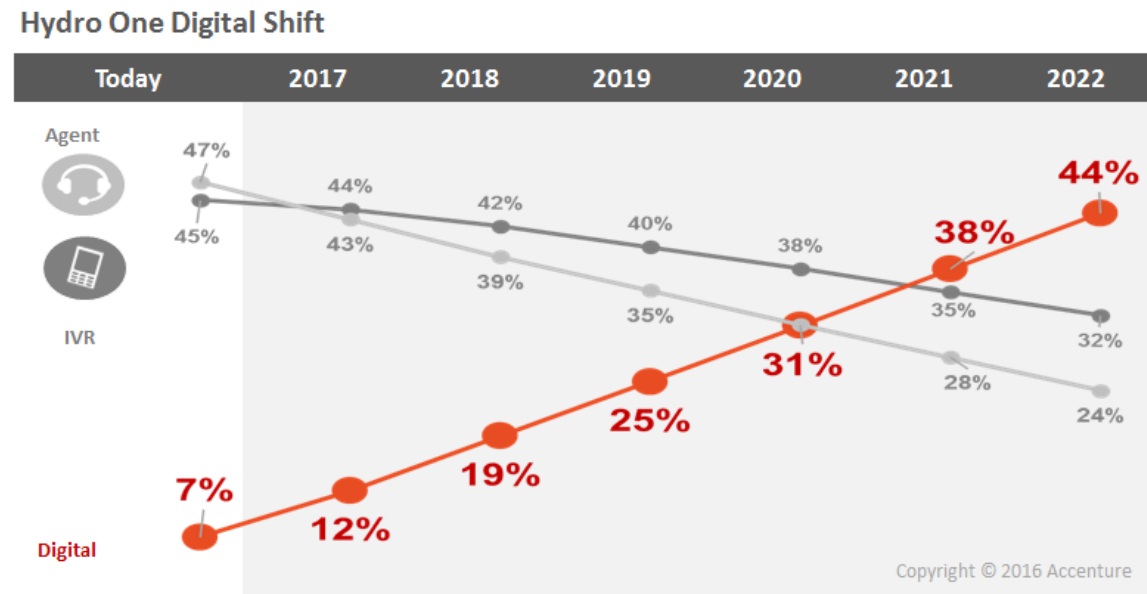
The current contract has a number of shortcomings and is not structured in a way that will allow Hydro One to meet its long term business objectives. When evaluating alternatives for the delivery of the services for March 1, 2018 and beyond, Hydro One had three primary business objectives:

- 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% |

1 **Ontario Sustainable Energy Association Interrogatory # 15**

2
3 **Issue:**

4 Issue 22: Has the applicant adequately demonstrated its ability and commitment to manage
5 within the revenue requirement proposed over the course of the custom incentive rate plan term?
6

7 **Reference:**

8 B1-01-01 Section 1.6 Page: 6

9 Preamble: “Reduce materiality threshold for IT capital expenditure.”
10

11 **Interrogatory:**

12 a) How will this recommendation save money overall? Will it increase OM&A and reduce
13 capital and depreciation?
14

15 **Response:**

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