

RESEARCH GROUP

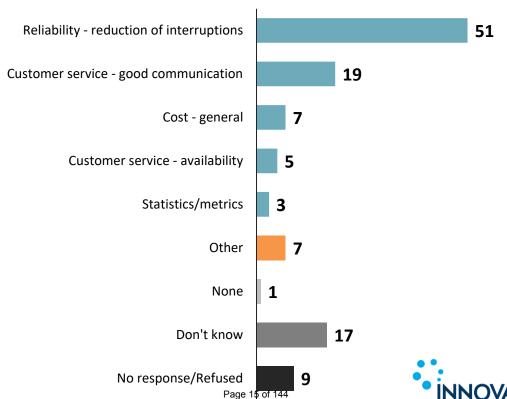
Reduction in outages and interruptions, power supply, and customer service in terms of communication are top mentions for performance metrics



How do you know if Hydro One is doing a good job for your business?

[asked of all respondents, n=103]

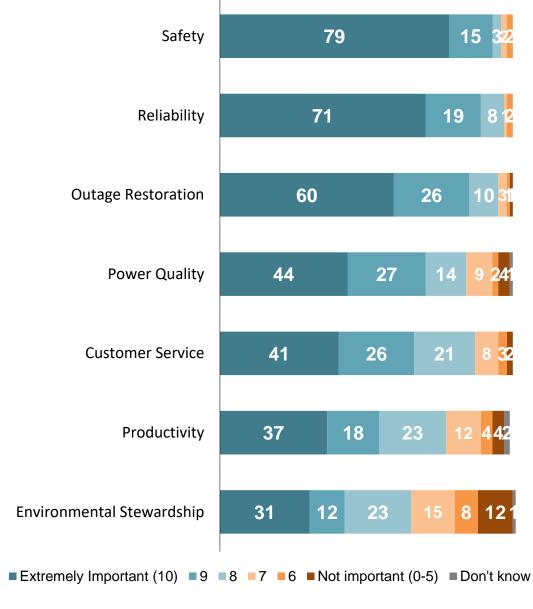




## **Customer Outcomes:**

Safety, reliability, and outage restoration are ranked as most important







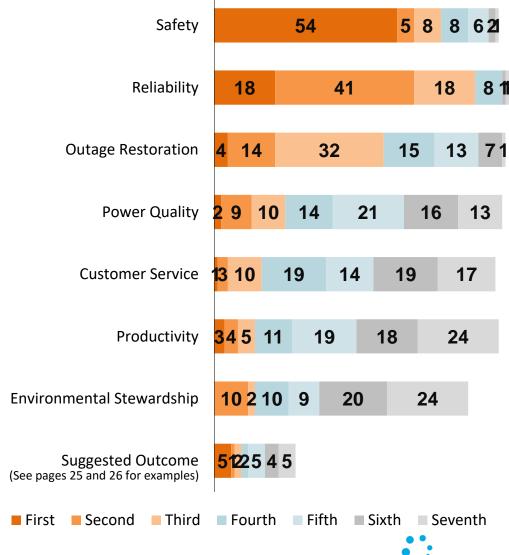
## **Top Priorities:**

More than half rank safety as *first* priority. Rolling top 3 priorities together, reliability and outage restoration increase as priorities

While all the outcomes listed are important to many customers, planners set priorities among different outcomes. The purpose of this section is to help Hydro One set priorities as it prepares its business plan. Which priorities should they focus on first?

Please rank your top priorities from the list below.

[asked of all respondents, n=103]





# Illustrative Scenarios: Information for Participants

A preamble provided background on four illustrative investment scenarios. Each scenario was then described in detail, and a summary table (below) provided a comparative overview of all four scenarios. The descriptions of the illustrative investment scenarios can be found on pages 18 to 22 of Appendix 1.2, and a slightly more detailed summary table was available to survey participants on page 18 of Appendix 1.3.

	Illustrative Scenarios				
	A: Limited investment	B: Decrease in current level of investment	C: Maintain current level of investment	D: Increase beyond the current level of investment	
5 Year Capital Investment	\$1.8 B	\$4.3 B	\$6.6 B	\$7.4 B	
Reliability Risk	Increase in risk ~30%	Increase in risk ~10%	Decrease in risk ~10%	Decrease in risk ~15%	
Long-term Reliability Impact	₩	₩	<b>^</b>	<b>ተ</b> *	
Average Percentage of Key Assets Beyond Expected Service Life by end of 2023 (21% in 2019)	29%	26%	19%	17%	
Impact on Future rates	Significantly higher future rate increases	Higher future rate increases	Level future rate increases.	Slightly lower future rate increases.	
Average Annual Total Bill Impact – Transmission Connected Customer	0.11%	0.27%	0.42%	0.46%	
Average Annual Transmission Rate Increase	1.30%	3.30%	5.10%	5.60%	

<sup>\*</sup> Improvement in overall long term reliability and significant performance improvement for small number of customers connected to the worst performing circuits.

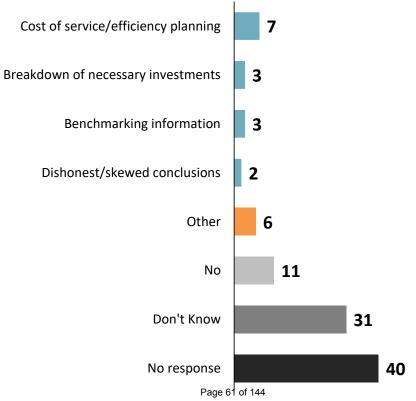


## **Content Covered:**

Very few comments; top comments related to cost of service

Was there any content missing that you would have liked to have seen included? [asked of all respondents, n=103]





## **Suggested Additional Outcomes**



Are there any outcomes we missed?

[asked of all respondents, n=103]

#### **LDCs**

- · Timely delivery of project milestones.
- nc
- · Communication transparency and timliness
- Price or cost- what is the value for money
- · Costing allocations should either be socialized on the whole rate base or significant lead time to
- · Easy to deal with.
- System capacity Have a transmission system with the capacity to meet the needs of our customers.
- · affordability lower rates

#### **End Users**

- · Weather risk mitigation system hardening
- · Flexibility of planned outages schedule to accommodate Customer restrictions
- Costs; You will say its inferred in productivity and others. This is the reason we are in a mess.
- Inclusion of major customers like Dofasco in communication of future local investments
- · Reduction on cost of GA
- So far none
- The slider above does not work in my browsers.
- New connections and upgrades built and energized on a timely basis.
- Responsiveness and personal assignment of a customer service representative for major customers
- Outage co-ordination with plant outages minimizing single line exposure.
- Your wages reflect those in industry, so that we don't keep losing our best people to you
- · something about 'managing and accommodating growth and expansion with IESO through SIAs / CIAs'
- · Response from local Hydro One team to respond to emergencies related to un-expected site power outage

## **Generators**

- Predictable schedule preparation and execution
- no
- Grid Capacity Expansion
- COST COST
- Communication within IESO and HONI
- · Efficiency of operations reducing the bureaucracy, having decisions at lowest reasonable level
- · general communication about direction of HONI certainly helps me as a customer understand ramification
- Streamline the customer service experience to be able to reach appreciate parties efficiently.
- Technology/Standard requirement
- Page 72 of 144
- Respect for other people's property eg talking with property owners before accessing

## **Comments on Customer Outcomes (1)**



Do you have any specific comments or suggestions regarding any of the seven outcomes that you just rated or any additional outcomes you added?

[asked of all respondents, n=103]

#### **LDCs**

- ensure that there is regular communications and dialogue
- None
- More timely response for communications and delivery of project milestones. Safety has been a concern when Hydro One crews have been working on shared ownership sites without engineered drawings under regulation O.22/04.
- Hydro One needs to fix its business processes and find productivity. I don't believe senior management in Toronto
  has the tools or workflow processes to manage or monitor projects efficiently in Northern Ontario. Until they sort
  out their internal workings, they don't deserve any rate increases.
- nc
- You can do more with less on all of this its not a trade off between money and results we need the results described and we need it at a more affordable rate.
- Only proceeding on productivity projects that will guarantee a financial payback and reduce rates for all customers. Tried to provide feed back in suggested outcome 1 box but was limited to one line of text. Frequency of outages is a higher priority than duration when dealing with the general public
- Cost estimates for work to be performed by Hydro One are extremely high. While part of the issue is the class C estimate contingency, those costs cause a lot of concern for customers considering connections for generators.
- Cost reductions should be a top priority and given serious consideration and not just lip service.

## **Transmission Customer Engagement**



### **Customer Outcomes**

Hydro One has to make choices in its planning, and it needs to know what is most important to you. Hydro One is responsible to the Ontario Energy Board to show how its plans provide the cost effective delivery of outcomes that customers value. To learn more about the customer engagement process and the Ontario Energy Board's requirements, See the "Additional Information" document.

In reviewing its previous customer engagement research and in discussions with customer-facing Hydro One staff including its Key Account Managers, Hydro One has developed a tentative list of outcomes for your review. This survey is going to ask you if anything is missing from that list, how important each outcome is to you, and which outcomes are most important compared to the others.

This section will ask you to rate how important the outcomes are to you and to share your thoughts on how Hydro One could do better. You will also have an opportunity to add any outcomes you feel are missing.

We will be asking you about the following seven outcomes:

- Customer Service
- Environmental Stewardship
- Outage Restoration
- Power Quality
- Productivity
- Reliability
- Safety

To rate the importance of an outcome, please select a point on the slider below each description. If there are areas that you don't have an opinion on, please select the "don't know" option.

# **Transmission Customer Engagement:**Additional Information



#### Reliability Risk Model

System reliability is often measured by the frequency and duration of power interruptions. These are historical measures or lagging indicators of performance because they are indicators of past asset investment decisions. While we can measure the historical contribution of equipment failures to system reliability, not every equipment failure leads to an interruption due to the redundancy of Hydro One's system. As a result, Hydro One cannot predict the impact of investments in equipment on SAIFI and SAIDI for the parts of its system that benefit from redundancy.

Reliability risk is a forward looking or leading indicator of system reliability performance. It is calculated using a model which forecasts the risk or probability of asset failure (or needed replacement), based on the historical relationship between asset age and retirement.

It is an outcome measure used to indicate the potential improvement or decline in system reliability as the result of an investment plan. This measure also serves as a directional indicator to inform the appropriate level of pacing of sustainment investments to avoid future decline in reliability. The reliability model is not used to identify specific asset needs and investments. Hydro One chooses the assets it replaces based on detailed assessments of their actual condition.

Delaying capital spending will, in time, result in more and more equipment outages. While redundancy ensures these outages do not immediately lead to customer interruptions, the outages will leave multi-circuit customers at risk of experiencing single-circuit reliability. Reliability risk helps to capture the expected risk customers face under these conditions.



Filed: 2019-03-21 EB-2019-0082 Exhibit B-1-1 TSP Section 1.3 Attachment 4 Page 1 of 2

#### **ATTACHMENT 4: RELIABILITY RISK SUMMARY**

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The reliability risk model was introduced by Hydro One in 2016 to provide a method for demonstrating the value of sustaining investments to customers and to provide a directional indicator to assess the effect of an investment portfolio on reliability.

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It is a simplified method to communicate risk to customers and stakeholders. It is not used to identify specific asset needs or justify investments. Asset needs are anchored by asset condition assessments and investments are justified by asset needs and prioritized in accordance with Hydro One's investment planning approach described in TSP Section 2.1, Investment Planning Process.

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In order to solicit impact from customers the reliability risk model was one of several measures used in the 2017 Customer Engagement Survey to quantify and communicate the outcomes associated with various investment scenarios. Customer input was a key factor that informed Hydro One's overall investment plan, which underpins this rate application. During customer engagement, there was no preferred investment plan. The risk prioritization investment planning methodology which was used to prioritize the investments underpinning the TSP1 was under development and not available as an alternative communication tool. As such, the reliability risk model was the method used to communicate risk to customers.

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In its Decision in Hydro One's last Transmission Rate Application (EB-2016-0160) the Ontario Energy Board ("OEB") found that the model needs further refinement and testing if it is to be used to convey to customers information about the value of capital investments in terms of system reliability. A third party assessment completed by Metsco

Witness: Donna Jablonsky

<sup>&</sup>lt;sup>1</sup> Detailed in TSP Section 2.1.

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- Energy Solutions Inc. has led to a similar conclusion and recommendations as discussed
- 2 in TSP Section 1.4, section 1.4.2.14.

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- 4 Hydro One is aware of reliability forecasting models however comprehensive assessment
- and testing of these models are not complete. Hydro One has completed substantial work
- in developing and refining hazard functions of its assets as discussed in TSP Section 1.4
- which form a good baseline for forecasting investment requirements. Hydro One will
- 8 continue to explore and assess other reliability forecasting models to quantify the
- 9 outcome of its investment plan in the future.

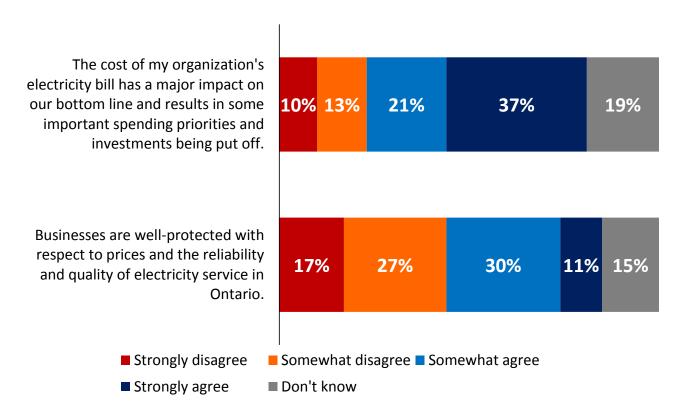
Witness: Donna Jablonsky

# **Environmental Controls:** Most (58%) LTX customers say their electricity bill is impacting their bottom line; opinion is divided on government protection



**H55 & H56.** For each statement please tell me if you would strongly agree, somewhat agree, somewhat disagree or strongly disagree.

[Asked of all respondents, n=112]



#### **Key Insights**

• A majority (58%) of LTX customers say their bottom line is being impacted by their electricity bill. Almost two-in-five (37%) *strongly* agree that this is the case.

• LDCs: 36% agree

Generators: 55% agree LDC

• End-Users: 91% agree LDC, GEN

 Opinion on whether or not businesses are protected in terms of prices, reliability ad quality of electricity service in Ontario is divided: 41% agree, and 44% disagree. However, the level of *strong* disagreement (17%) is marginally higher than the level of *strong* agreement (11%).

• LDCs: 40% agree

• Generators: 52% agree EU

• End-Users: 32% agree





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

## **DECISION AND ORDER**

EB-2016-0160

## HYDRO ONE NETWORKS INC.

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

**BEFORE: Ken Quesnelle** 

Vice Chair and Presiding Member

**Emad Elsayed** 

Member

Peter C. P. Thompson, Q.C.

Member

Revised: November 1, 2017

budgets. For example, it highlighted that it has been able to maintain transmission OM&A at steady levels over recent years, despite factors putting upward pressure on OM&A costs.<sup>51</sup>

#### **Findings**

The OEB first implemented the use of scorecards as a component of its RRF when it developed a generic scorecard to be used by all regulated distributors. The use of a generic scorecard facilitates performance monitoring and benchmarking. For transmitters, the OEB more recently established its expectations regarding scorecards in its filing guidelines for transmission applications to the OEB.

The filing guidelines contain the expectation that transmitters will propose scorecards that reflect their individual business realities and that can be used to measure and monitor performance and, where appropriate, enable comparisons among transmitters.

Hydro One is seeking "approval" of its proposed scorecard. The OEB does not consider it necessary that Hydro One have an approved scorecard at this time. The OEB notes that Hydro One has indicated that it will continue to develop a performance management system and finds that Hydro One should include the OEB's determinations that follow to further evolve its scorecard in concert with the further development of its performance management system. The OEB expects Hydro One to propose an evolved scorecard in its next transmission rate application.

Hydro One has provided its analysis of how its proposed transmission business scorecard and key performance indicators align its business interests with those of its customers. In that respect Hydro One has met the expectations of the filing requirements. Hydro One's proposal is detailed, well-articulated and transparent. The following determinations are to inform Hydro One's continued scorecard development.

In the area of customer satisfaction, the OEB has provided its findings on Hydro One's customer engagement initiatives. Hydro One should develop performance indicators that better reflect the satisfaction level of the ultimate end use customer. The OEB does not consider the satisfaction level of directly connected local distributors to be indicative of their customers' level of satisfaction. Local distributors do not necessarily represent the interests of their customers on transmission issues nor do they suffer the same negative consequences if transmission service levels are poor.

Hydro One, as a corporate entity, has 1.3 million distribution customers. Hydro One should improve its internal institutional processes to better inform the transmission

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<sup>51</sup> Exhibit B2/Tab 1/Schedule 1/p. 11

performance management system of its distribution customers' satisfaction level for the purpose of gauging what, if any, elements of transmission operation are the cause of any dissatisfaction.

With respect to operational effectiveness, the OEB finds Hydro One's proposed Cost Control measures to be appropriate as the ratios proposed will provide meaningful measures of relative quantitative benchmarks that can be monitored over time. However, the measures proposed for asset management could potentially run counter to the cost control performance indicators. The asset management measures are directly linked to Hydro One's budget and "OEB-approved plan". It is important to note that the OEB does not approve capital plans, but rather a capital envelope which provides an input to the revenue requirement which in turn determines the approved rates. The capital plans that underpin the submitted revenue requirement in an application are intended to illustrate the need for the submitted revenue requirement on a prospective basis. In other words, the plan is provided to facilitate consideration of the reasonableness of the requested revenues.

In this Decision, the OEB has directed Hydro One to provide a report on the execution of its capital plan. The purpose of the report is to demonstrate that its planning process is robust and that it is capable of executing the plan. This report is to include rationale for any departure from the plan. Such rationale may include awareness that the plan is no longer considered economical. This awareness would be based on previously unknown situations, solutions or more generally, a change in the main drivers for the original plan. In other words, it becomes apparent that the execution of particular elements of the plan is no longer in the interest of the customer. The proposed scorecard does not encompass the potential for this eventuality and to the extent that this performance indicator drives employee compensation it has the potential to suppress the desired ongoing evaluation of the prospective plan. As the OEB has determined in this Decision, plan execution is important but it should not be driven by a performance indicator solely based on ensuring the level of spending originally considered reasonable is spent.

Asset management is at the core of Hydro One's business function. The OEB expects Hydro One to consider implementing broader Asset Management measures that are directly related to positive outcomes for its customers. For instance, performance measures related to improvements in Hydro One's asset diagnostics that enhance the accuracy of asset replacement schedules could result in direct benefits to customers.

With respect to Policy Response, the OEB does not consider Hydro One's proposed inclusion of North American Electricity Reliability Corporation (NERC) and Northeast Power Coordinating Council (NPCC) Standards to be aligned with the intent of this

Decision and Order Revised: November 1, 2017

Filed: 2019-08-02 EB-2019-0082 Exhibit I Tab 01 Schedule 39 Page 1 of 4

#### **OEB INTERROGATORY #39**

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#### Reference:

- 4 TSP-01-03
- 5 (1) pp.6-7 Figure 2
- 6 (2) p.8
- 7 (3) Attachment 1, p. 5
- 8 (4) Attachment 1, p. 15

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#### **Interrogatory:**

At the first reference above, Hydro One stated the following:

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Hydro One's Transmission Customer Engagement Survey process yielded valuable feedback concerning the specific needs and preferences of its transmission-connected customers to shape Hydro One's investment plans.

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At the second reference above, Hydro One stated the following:

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Cost was also raised at various times throughout the survey. The desire for good reliability at a competitive or low cost was universal.

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At the third reference above, Hydro One stated the following:

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#### **Customer Outcomes**

Hydro One and INNOVATIVE reviewed previously available documents and talked to customer-facing Hydro One staff in order to develop a list of customer outcomes that was included in the survey. Prior to being exposed to this list, an open-ended question designed to elicit outcomes in customers' own words was asked. In response to this open-ended question, transmission customers said they know Hydro One is doing a good job for their business based on reliability, and customer service/communication (both of which were included in the list of outcomes developed for the survey).

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At the fourth reference above, Hydro One stated the following:

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#### Performance Criteria:

Reduction in outages and interruptions, power supply, and customer service in terms of communication are top mentions for performance metrics.

a) Given that the "desire for good reliability at a competitive or low cost was universal", why doesn't Hydro One consider Cost as one of the Customer Outcomes to be ranked when setting priorities for Hydro One's business plan?

- b) Is the reason Low Cost is not included in the ranked list of Customer Outcomes because it is ranked below the other identified outcomes (i.e. Safety, Productivity, Reliability, Outage Restoration, Power Quality, Customer Service, and Environmental Stewardship)?
  - i. If not confirmed, please provide a revised ranking of Customer Outcomes that includes Low Cost, and provide the evidence on which Hydro One makes this ranking determination.

- c) Regarding the Customer Outcomes, how did Hydro One translate the information gathered and represented in Figure 2 to actionable information?
  - i. For example, do the results represented in Figure 2 suggest that Hydro One is not doing enough regarding "Safety"?

- d) Please provide details on what changes Hydro One made to its capital expenditure planning processes (for example, by increasing or decreasing consequences within the risk management process) as a result of the findings in Figure 2 Customer Outcomes. For each response below, please provide examples.
  - i. Did Hydro One change its approach to either Safety or Environmental Stewardship, and did that result in the acceleration or deceleration of certain CAPEX projects?
  - ii. How did Hydro One alter its productivity programs plans discussed in TSP Section 1.6 in response to customer feedback?
  - iii. Did Hydro One ask any follow-up questions that explain why customers do not seem to favour Hydro One emphasizing higher productivity, which implies that Hydro One would be trying to provide more benefit relative to its input costs?

e) Hydro One and Innovative developed the list of Customer Outcomes (Figure 2), however when asked "How do you know if Hydro One is doing a good job for your business?" Hydro One's customers did not reference Safety, Productivity or

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Environmental Stewardship. Is this a fair statement? If so, please explain this disconnect.

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#### **Response:**

a) For the purposes of developing an investment plan for the transmission system, it is important to understand customer preferences relative to each other. Cost is a certain outcome of any investment so its relative ranking was determined to be less informative as a stand-alone outcome. Rather, customers were provided an opportunity to indicate the importance of cost relative to outcomes through four illustrative scenarios with associated impacts including but not limited to rate and reliability impacts. See Hydro One's Customer Engagement Survey Report at Exhibit B-1-1, Sec 1.3, Attachment 1, pages 44-52.

Hydro One does consider cost a customer outcome. For example, during the customer consultation, under the "Productivity" outcome, customers were presented with the following: "Implementation of new technologies and processes to enable operational efficiencies in the planning and execution of work programs aimed at reducing costs and more efficient use of resources. Hydro One understands that customers expect it to look first for internal savings before asking for any additional rates. How important an outcome is productivity?" (Exhibit B, Tab 1, Schedule 1, Section 1.3, Attachment 1, page 23.) Further, as part of Hydro One's Strategic Priorities, Operational Effectiveness includes a "Focus on continuous improvement in productivity and operating efficiency to maintain lowest possible costs" (Exhibit B, Tab 1, Schedule 1, Section 2.1, page 5).

- b) No. Low Cost was not asked to be ranked.
  - i. The list cannot be revised to include Low Cost as this information does not exist. Please refer to a) above.

- c) Please refer to Exhibit B, Tab 1, Schedule 1, Section 1.3, subsection 1.3.6.2 which summarizes alignment between customer outcomes, Hydro One's risk scoring process, and the use of the Customer Engagement flag to provide additional context to trade-off discussions.
  - i. No, Figure 2 does not suggest that Hydro One is not doing enough regarding "Safety"; rather it indicates that "Eliminating and mitigating risk to public and employee safety in the operation of the transmission system" is extremely

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important to customers and that Hydro One should continue to maintain a focu on safety.

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#### d) Please see below:

- The customer engagement feedback reinforced that safety and environment were important considerations for customers; as a result, certain investments were accelerated or decelerated such as the deferral of wood pole replacements in not publicly accessible areas.
- ii. Hydro One has embedded significant productivity savings into the Transmissic System Plan, reflecting a commitment to continuous improvement to delive Hydro One's work program at a lower cost.
- iii. No.

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- e) No, this is not a fair statement. In the customer verbatim responses included in Exhibit B, Tab 1, Schedule 1, Section 1.3, Appendix 1.1, customers did reference both safety and productivity, including:
  - i. "Open dialogue and regular face to face visits reassure us HO understands the
    impacts of safe reliable operations"
  - ii. "Costs to businesses are kept in control. Evidence that cost control at Hydro Or is in place and effective."

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Beyond these, when you compare the open-ended responses to the closed-enderesponses, the key difference is that some outcomes are "table stakes", things the are important but taken as a given. For instance, safety receives the highest ratin for importance but receives relatively few open-ended mentions not because it unimportant but because TX customers are generally satisfied with the experience on this very important dimension.

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Productivity is relatively less important on the rating and ranking but that does not mean it is unimportant. Thirty seven (37) customers rate it a 10 and another 4 give it an 8 or a 9. End users are more likely to give it a higher rating and w anticipate that is also true of end-users served by LDCs.

Further, environmental stewardship is reflective of public policy responsiveness, key outcome identified by the OEB in the Renewed Regulatory Framework.

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#### **OEB INTERROGATORY #41**

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#### **Reference:**

- 4 TSP-01-03, TSP-01-03-01, TSP-01-03-04
- 5 (1) p.8
- 6 (2) Attachment 1, pp. 44-47
- 7 (3) Attachment 1, p.116
- 8 (4) Attachment 4, pp. 1-2

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#### **Interrogatory:**

At the first reference above, Hydro One stated the following:

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The key messages and results received by Hydro One from the 2017 Transmission Customer Engagement Survey are as follows:

When presented with several investment scenarios, the majority of customers
preferred investment levels in line with the investment plan that was before the
OEB in the Prior Proceeding by at least a three to one margin. It is seen as
reflective of the current approach which has served the system well, and a less
risky option;

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At the third reference above, Hydro One stated the following:

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You will note that the two middle scenarios, B and C, offer a relatively small change in reliability risk, but moving from B to C offers significant improvements in long-term reliability. The key difference between B and C is that B has larger future increases, while C has level future rate increases. The big differences in reliability are in scenarios A and D. Moving from A to B creates a significant decline in reliability risk. Moving from scenario C to D generates both a long term reliability benefit and targeted reliability improvements for a small group of customers.

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At the fourth reference above, Hydro One stated the following:

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In its Decision in Hydro One's last Transmission Rate Application (EB-2016-0160) the Ontario Energy Board ("OEB") found that the model1 needs further refinement and testing if it is to be used to convey to customers information about the value of capital

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Witness: Spencer Gill, Donna Jablonsky, Greg Lyle

<sup>&</sup>lt;sup>1</sup> Reliability Risk Model

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investments in terms of system reliability. A third party assessment completed by Metsco Energy Solutions Inc. has led to a similar conclusion and recommendations as discussed in TSP Section 1.4, section 1.4.2.14.

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a) What was Hydro One customers' weighted-average preference (on a scale of 1 to 17) of the investment scenarios?

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- b) For each of the Scenarios A, B, C and D, how did Hydro One precisely quantify for the survey respondents that "[t]he key difference between B and C is that B has larger future increases, while C has level future rate increases"?
  - i. Did Hydro One develop any example rate datasets to illustrate key differences between scenarios? Please provide examples that were presented to customers.

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- c) For each of the Scenarios A, B, C and D, how did Hydro One precisely quantify for the survey respondents that "[t]he big differences in reliability are in scenarios A and D. Moving from A to B creates a significant decline in reliability risk. Moving from scenario C to D generates both a long term reliability benefit and targeted reliability improvements for a small group of customers."?
  - i. Did Hydro One develop any example reliability datasets to illustrate the differences between scenarios? Please provide examples that were presented to customers.

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d) What efforts has Hydro One undertaken to determine how sensitive HONI customers are to the marginal trade-offs between costs and performance (e.g. reliability or power quality)?

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e) Did Hydro One populate the Reliability Risk estimates in the above table using the Hydro One Reliability Risk Model?

i. If yes, did Hydro One advise the customers answering the survey that "the Ontario Energy Board found that the model needs further refinement and testing if it is to be used to convey to customers information about the value of capital investments in terms of system reliability. A third party assessment completed by Metsco Energy Solutions Inc. has led to a similar conclusion and recommendations"?

Witness: Spencer Gill, Donna Jablonsky, Greg Lyle

Filed: 2019-08-02 EB-2019-0082 Exhibit I Tab 01 Schedule 41 Page 3 of 3

#### Response:

a) Hydro One customers' weighted-average preference of the investment scenarios is 9.98.

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b) The illustrative capital scenarios included both near term reinvestment options and those which would be paced out beyond the TSP period. The pacing of scenarios was directional in nature beyond the TSP period; no rate schedules were created for periods beyond the TSP period.

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c) The Reliability Risk Model was used to communicate directional risk to customers and stakeholders. Please refer to Exhibit B, Tab 1, Schedule 1, Section 1.3, pages 114 to 115 for details on the scenarios presented.

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d) Hydro One has not undertaken this sensitivity analysis.

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e) Yes, the Reliability Risk Model was used. No, the customer engagement process was conducted prior the issuance of the OEB decision; the feedback from the OEB and subsequent METSCO report had not yet been received.

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#### OEB INTERROGATORY #42

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#### **Reference:**

4 TSP-01-03 p. 10-11

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#### **Interrogatory:**

At the above noted reference, Hydro One stated the following:

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Figure 3 illustrates the trend of the overall satisfaction results. In 2018, Overall Satisfaction was at the highest point in the past seven years at 90%, which is a 12% increase since 2016. The increase in overall satisfaction can be attributed to LDCs and generation customers. The main driver identified through analysis for higher customer satisfaction was customer communication and key account managers. The identified driver correlated with lower satisfaction was the ability to recall a planned outage.

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- a) Please explain what is meant by "The identified driver correlated with lower satisfaction was the ability to recall a planned outage."
  - i. Should this sentence refer to "unplanned outages" as opposed to planned outages?

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- b) Please confirm that Hydro One's Customer Satisfaction metrics show <u>no</u> statistically significant correlation with:
  - i. Any cost measure/metric.
  - ii. Any reliability measure/metric, aside from the "recall of an unplanned outage".

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c) Given that customer communications and key account managers have a statistically significant impact upon customer satisfaction metric, are there any cost saving measures that Hydro One could implement to reduce the cost of its customer interaction process?

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d) Does Hydro One use the Customer Satisfaction metric to justify any CAPEX projects included in this filing?

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#### **Response:**

a) A regression analysis was completed by Innovative to determine if there was a correlation between overall satisfaction and other questions asked in the survey. If there was a correlation then this was deemed to be a driver of satisfaction.

Witness: Spencer Gill, Greg Lyle

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i. Yes. This sentence should refer to unplanned outages.

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- i. The survey does not explore cost other than one environmental control question that can be found in Exhibit B-1-1, TSP Section 1.3, Attachment 5, page 23. This question was not correlated to overall satisfaction.
  - ii. Confirmed. The only correlated driver is the recall of an unplanned outage. All correlated drivers can be found in Exhibit B-1-1, TSP Section 1.3, Attachment 5, page 26.

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c) Key Account Management reviews its costs and considers cost saving opportunities on an annual basis. Recently the Account Executives were reassigned from customergroups into geographic regions to better serve customers, and reduce on travel.

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d) No.

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#### **SEC INTERROGATORY #19**

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#### Reference:

TSP-01-05 p.11

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#### **Interrogatory:**

Please confirm that Hydro One did not develop a performance indicator that better reflected the satisfaction level of the ultimate end-use customer as directed by the Board in its EB-2016-0160 decision.

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#### Response:

In its 2017 Transmission Customer Engagement Survey, Hydro One asked LDCs to identify whether or not their responses to the survey were informed by their own customer engagement activities for the purposes of their own rate applications. The LDC End-User Satisfaction section of TSP Section 1.5, pages 11, 12 and 13 also addresses the OEB's direction in EB-2016-0160.

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Hydro One also contacted LDCs to solicit further approaches it could use to obtain feedback from LDC end-users, in the future. The feedback from LDCs included: (i) suggestions to continue using the account executive model to serve the needs of LDC customers, a program Hydro One has expanded as described above; (ii) that Hydro One meet with the large industrial customers of other LDCs, with Hydro One executives responding to customer concerns. Hydro One executed this suggestion and will facilitate future meetings as requested by LDCs; and (iii) that Hydro One may review LDC survey information, which it already takes into consideration during the course of its investment planning process. See TSP Section 1.3, pages 28 to 30.

Witness: Spencer Gill