January 13, 2022

Christine E. Long
Registrar and Board Secretary
Ontario Energy Board
2300 Yonge Street, P.O. Box 2319
Toronto ON
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Dear Ms. Long

RE: EB-2021-0307 Reliability and Power Quality Review
Energy Probe Comments

In its letter of November 30, 2021, the OEB invited stakeholders to comment on specific questions in its EB-2021-0307 Reliability and Power Quality Review. Attached document provides the comments of Energy Probe Research Foundation (Energy Probe).

Respectfully submitted on behalf of Energy Probe.

Tom Ladanyi
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Date: 2022.01.13 17:14:11 -05'00'

Tom Ladanyi
TL Energy Regulatory Consultants Inc.

cc. Patricia Adams (Energy Probe Research Foundation)
Helen Guo (OEB Staff)
Roger Higgin (Sustainable Planning Associates Inc.)

EB-2021-0307 Reliability and Power Quality Review

Energy Probe Comments

January 13, 2022

General Comments

As greater demands are placed on the electricity grid there is a risk that reliability and power quality could decline, particularly due to fast charging of electric vehicles (EVs) and exporting distributed energy resources (DERs) such as customer owned rooftop solar panels and storage batteries. Reliability and power quality will vary between distributors and between different areas on a distributor's grid and at different times of the day.

Most electricity customers are now expected to use the internet for banking, for payment of utility bills, for work, and for online learning of customers' children. Internet is seen as an essential service. The reliability of internet service is dependent on the reliability and power quality of electricity supply. Momentary outages can cause the loss of internet service. While momentary outages were not a significant concern when existing reliability standards were put in place, they are a significant concern now.

Certain customers who need or want protection from momentary outages can buy and install an uninterruptible power supply (UPS) behind their meter for their own use. However, vast majority of customers have not and never will install an UPS and will continue to rely on the electricity distributor or transmitter to maintain reliability and power quality. Distributors and transmitters will need to make investments just to maintain existing reliability and power quality. Energy Probe believes that customers who cause a deterioration in reliability and power quality should pay for those investments. Energy Probe understands that cost recovery for reliability and power quality investments by distributors and transmitters may not be within the scope of this review, but the outcome of this review is likely to affect cost recovery issues in the future.

Energy Probe's Comments on Questions for Stakeholders' Consideration

<u>Utility Accountability</u>

OEB staff's assessment of distributors' reported data suggests that there may be a significant gap in reporting between transmitters, host distributors and embedded distributors in terms of delivery point/loss of supply outages. Outages reported under loss of supply and major events account for more than 50% of the total number of sustained outages in the province. What type of improvements to transmission and/or distribution reporting and/or performance expectations should be considered to increase utilities' responsibilities for loss of supply events?

Energy Probe believes that reporting of events could be improved by including more details on Loss of Supply. Supply to a distributor's customers is often a result of upstream events from the systems of transmission and/or host distributors. Delivery point reliability measures should be given more weight due number of customers affected. The use of a standard such as IEEE Standard 1366-2012 may be appropriate.

What are stakeholders' views on the appropriate form of incentives to drive reliability performance?
Energy Probe believes that reliability performance should be linked to financial performance. For transmitters and host distributors a higher weighting of delivery point reliability than distribution system reliability should be used based on number of customers affected per delivery point. Targets should be a combination of 3-year average and 3-year prospective forecast rather than only retrospective as is currently in the OEB Transmitter/Distributor Regulatory Scorecards

OEB staff's assessment of reported Major Events suggests that distributors have very different interpretations of what constitutes a "Major Event", which affects overall reliability performance scores.
The only Major Event should be an extreme event the system was not designed to deal with and is beyond the control of utility management. Examples would be ice storms, mudslides, earthquakes, floods, political instability, labour strife and war.

Should the OEB revise its Major Event reporting requirements to achieve a common understanding among distributors regarding the type of outages and events that should be reported under the Major Event category?
Yes, what is a Major Event should be clearly defined and reporting of Major Events should be standardized.

Should the OEB review the effectiveness of outage restorations?
Possibly. Energy Probe believes that reviewing the effectiveness of outage restorations would expand the mandate of the OEB into a technical area where it may lack technical expertise. This is an area where the IESO and TSSA have the technical expertise and the OEB should either work with these agencies or delegate the authority to them.

OEB staff's assessment of historical outage data has also suggested that there are inconsistent approaches between distributors in terms of reporting outages (e.g., different interpretations between "Adverse Weather" and "Tree Contacts" defined in RRR). What is the best approach to ensure consistent outage cause reporting across the sector?
The best approach would be to put in place clear definitions and then monitor reporting for the following year.

<u>Monitor Utility Performance</u>

The current performance evaluation (i.e., service area level SAIFI & SAIDI) does not support benchmarking across the industry due to the different characteristic of each utility (such as size and locations). What would be required to ensure successful distributor reliability benchmarking across the sector?
The current common approach to benchmarking does not work well because of great differences in size of distributors and their geographical locations. Benchmarking should be segmented into categories such as Northern Ontario and Southern Ontario, Large Distributors and Small Distributors. Quality of service standards may vary commensurate with number of customers affected and the region served.

Power quality and momentary outages can have a significant impact on customers. The OEB has seen an increase in customer concerns regarding these issues. Should the OEB establish reporting requirements to monitor utility performance in relation to momentary outages and power quality issues?
Yes. As noted earlier, momentary outages can be major concern to customers due to the disruption of internet connectivity among other economic impacts.

What type of power quality issues should be and can be reported and monitored?
Power quality issues can vary greatly by time and location. It may be difficult to determine appropriate standards. However, external to a distributor's system there are fewer connection points to be monitored and the upgrades needed to monitor and report on these is feasible goal.

Customer Specific Reliability

Given customers' expectations are changing because of an increasing reliance on a reliable system, should the OEB develop customer-focused reliability measures that can provide greater transparency on the level of service individual customers are receiving?
Yes. The OEB should consider instituting Customer Focussed Indices such as CEMI (Customers Experiencing Multiple Interruptions), CELID (Customers Experiencing Long Interruption Durations) and CEMM (Customers Experiencing Multiple "Momentaries"). The CEMI index includes both momentary and long interruptions while CEMM only includes momentary interruptions. According to the information that Energy Probe has been able to find, a number of US states now require CEMI reporting, and one is also using CEMM.

Along with creating customer-focused reliability standards, should the OEB consider consequences when reliability performance expectations are not met? (e.g., customer compensation when reliability falls below acceptable level)?
No. Energy Probe believes that this could cause more problems than it solves. Reliability performance issues will not equally impact all customers of a utility. Compensating customers could result in situations where certain customers are over-compensated while others are under-compensated.

Utility Planning

How should reliability data be enhanced to support effective utility planning and rate setting?
The network should be designed to meet reliability targets based on system average and customer specific reliability data that would take into account both resilience of the grid to Major Events and the number of customers affected at each node in the grid.

Are there any established methodologies to quantify the value, from a reliability perspective, added by transmission and/or distribution investments?
Energy Probe is not aware of any established methodologies that quantify the reliability and power quality value added by various transmission and distribution investments. Energy Probe believes that value added by each investment is unique and may not allow quantification by a standard methodology.

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Respectfully submitted on behalf of Energy Probe by its consultants,

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