

December 22, 2021

VIA RESS

Ms. Christine E. Long
Registrar
Ontario Energy Board
2300 Yonge St., Suite 2700
Toronto, ON M4P 1E4

Dear Ms. Long:

Re: Reliability and Power Quality Review (“RPQR”) (EB-2021-0307)

On November 30, 2021 the Ontario Energy Board (“OEB”) launched a review of reliability and power quality in Ontario’s electricity sector. OEB staff have analyzed data reported by distributors and identified issues for discussion with stakeholders which focus on four broad areas: enhancing user accountability, customer-specific reliability, monitoring utility performance, and supporting effective utility planning.

The OEB has defined the intention of this consultation as developing new approaches to measuring and assessing reliability to enable the potential for moving to stronger incentives for reliability performance and improve the effectiveness for the assessment of capital plans submitted by distributors.

Alectra Utilities (“Alectra”) believes this is a very important initiative and not only welcomes the review but also credits the OEB for recognizing it as such. Specifically, Alectra agrees with the OEB that changes in the sector and with customer expectations warrant a review of the importance of reliability and an assessment of its place within the overall performance framework

The OEB has proposed to focus initially on issues that would increase accountability to customers through greater transparency and support the OEB’s rate setting processes. Specifically, the OEB will focus on:

- enhanced reporting on major events and delivery point performance to provide greater accountability to customers for reliability performance;
- ensuring consistency in reporting across utilities to support benchmarking; and
- implementing customer specific reliability measures.

The OEB will be issuing a customer survey to solicit feedback directly from customers. The OEB is also seeking input from stakeholders on the issues that should be addressed as part of the

review, the prioritization, and the approach that should be taken to address those issues. The OEB has issued specific questions pertaining to each of the four broad areas of focus. Alectra's preliminary responses to each of these questions are presented below.

Input on Areas of Focus

1. Utility Accountability

- a. 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 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? What are stakeholders' views on the appropriate form of incentives to drive reliability performance?**

A focus on reliability that excludes loss of supply outages does not benefit Ontario's ratepayers. When it comes to reliability, customers are less concerned with the source of the disruption and more that the disruption occurred, its severity and the duration of the outage. Reliability lies at the heart of what customers expect and deserve from the electricity system in Ontario. Infrastructure investments that are designed to improve reliability should be viewed by the OEB as among the most critical projects for review and approval. In order to improve reliability issues, utilities may require additional means to achieve such outcomes. Solutions that provide flexibility in operations such as interties and transfers within utility systems enable utilities to actively manage load on their systems to maximize the reliability effect. Further, projects that enhance or reinforce poor performing sections or asset types may also drive reliability performance improvements.

Often, distribution reliability issues can arise from loss of supply issues that take place on the transmission system or upstream distribution supplier. For example, in certain locations, Alectra customers rely on supply solely on Hydro One's distribution system, so disruptions there can have direct impacts for Alectra customers. Investments in additional system interties and transfers provide system flexibility and mitigate dependency on a sole upstream supply point.

Both reporting and OEB review of investment plans to improve reliability should properly give weight to issues of loss of supply, even where the cause is beyond the distributor's control. This kind of clarity can be used to effectively determine and evaluate other options available to distributors (e.g., interties, transfers, distributed energy resources).

A variety of incentive mechanisms could be used to drive reliability performance improvement. As above, the place to start is to prioritize infrastructure investments aimed at improving reliability. In terms of performance incentives, Alectra's view is that it is more impactful for utilities to be rewarded for exceptional performance, rather than penalized for subpar performance. Incentives can also be used to drive incremental performance improvements.

The structure and design of an incentive framework need not be restricted to direct financial rewards. For example, strong reliability performance could result in reduced lighter-handed regulatory treatment for reliability improvement projects. It may also be worthwhile considering a reduced stretch factor assignments for top tier reliability performance. Alectra looks forward to examining the ideas brought forward by other stakeholders for review and evaluation.

- b. 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. 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? Should the OEB review the effectiveness of outage restorations?**

The OEB should work with all distributors to define more clearly what constitutes a "Major Event". Such consultation should aim to establish a common understanding among distributors for reporting purposes and may reveal that the OEB should revise the reporting requirements. As a first step, a common understanding might be achieved by reviewing specific examples and/ or hypothetical scenarios for applying a Major Event.

Reporting requirements could consider regional operating areas and the cause of an outage for the purpose of Major Event reporting, given the geographic nature of weather events. In particular, reporting for Major Events could be improved for utilities impacted downstream of the transmitter, or for embedded distributors who are fully dependent on another entity for supply.

One specific idea is that the OEB could standardize reporting to better align with the "2.5 Beta Method" as outlined by the IEEE Standard 1366-2012. Furthermore, Major Event Days could be defined to be triggered by only uncontrollable cause codes such as loss of supply, adverse weather, adverse environment, lightning and foreign interference. In this context, Major Event Days should be applied for force majeure events of significant measure that are beyond the control of the distributor or exceed the parameters or conditions that the distribution system was reasonably designed to withstand.

In respect of outage restoration benchmarking, the relative effectiveness of such activity is heavily dependent on multiple factors including demographics, time of day of the outage (i.e.,

impacts such as traffic, availability of crews, visibility), weather conditions, condition of the assets, amount of automation available on system, level of demand/loading on the system to facilitate transfers, etc. As such, it would be very difficult to compare effective outage restoration across utilities without taking such variables into account.

- c. 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?**

Reporting by both transmitters and distributors could be improved upon by developing clear examples for inclusion in the RRR Filing Guide which outline the criteria for determining the source of interruption. This would be of benefit to all distributors and could serve to help minimize reporting gaps. Additionally, further clarity may be derived by adherence to the IEEE Standards for Reliability Reporting (IEEE Standard 1366-2012). This would better facilitate root cause analyses, consistent with engineering principles. Furthermore, standardization of reliability reporting and development of common definitions of outage events should be aligned with the Canadian Electrical Association practices to enable a national data set for comparison beyond Ontario.

2. Monitor Utility Performance

- a. 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?**

Alectra agrees that the use of SAIDI and SAIFI alone does not provide the full representation of reliability for a distributor, and therefore limits the effectiveness for benchmarking and comparison. SAIDI and SAIFI are system-wide averages that can mask certain performance issues within a utility’s system, for any of a host of reasons. This means that even while the system average can show high performance, there can remain certain areas of the system with very poor performance.

For example, sometimes weather may affect certain regional areas more than others (even within a utility’s service territory). Where this occurs within a utility’s service territory, the ability to deal with the issue will depend on the distributors ability to transfer loads, which may not be equal across distributors, or even within a utility’s service territory. A utility’s ability to use automation, controls and transferability will affect the severity of such events and will affect comparisons across the industry.

For benchmarking purposes, such comparisons should consider ‘like for like’ comparisons. As alluded to in the question, comparing utilities with vastly different sizes, customer compositions, or locations (i.e., rural or urban) can drastically impact comparability. More meaningful comparisons could be attained by grouping similar utilities for benchmarking purposes. For example, distributors with plant that was installed in the 1950’s or 60’s may not be directly comparable to those with plant installed in the 1990’s given the stark difference in the materials/standards of the installed plant, which can have a dramatic impact on reliability performance. Such differences can also have material impact on restoration effort, time, and cost. Customer count and density also affect comparability across distributors.

The OEB could begin this work by sorting utilities across a variety of dimensions (age of system, rural or urban, size, etc.) for stakeholders to assess and then review and comment as to the appropriateness of such groupings for benchmarking purposes.

b. 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? What type of power quality issues should be and can be reported and monitored?

Many customers, including residential customers, are increasingly indicating a sensitivity to momentary outages as well as power quality issues, mainly a result of a greater proliferation of higher efficient equipment in use, which is sensitive to power quality. In addition, as we have seen through the course of the pandemic, more customers are working from home. Larger customers in particular may have especially low tolerances for momentary outages or power quality as it can damage costly equipment and/or impact processes. While there is good reason to consider reporting for power quality, given the very customer-specific nature of the issue, a first step would require the establishment of a specific definition to facilitate common reporting among distributors.

Furthermore, as the penetration of Distributed Energy Resources (“DERs”) continue to expand, issues related to power quality will become increasingly important to manage and maintain. In this event, the probability of power quality disturbances are likely to increase, requiring greater attention, effort and focus from distributors. It is likely that distributors will require a greater need for tools to measure and manage power quality, including automation, digitalization, and sensory tools. Utilities should be able to implement the infrastructure to measure issues such as harmonics, voltage sags, and sympathy trips discretely.

In Alectra’s view, all outage events that impact ratepayers should be considered for reporting, including both sustained and momentary outages. The cumulative effect of outage event provide a full perspective of the reliability performance for ratepayers. The OEB could consider reporting

“MAIFI” (Momentary Average Interruption Frequency Index) or “CAIDI” (Customer Average Interruption Duration Index) to complement the SAIDI and SAIFI measures.

On the other hand, power quality issues are typically customer or site specific, and often occur behind the meter. As such, it would be very difficult to establish reporting standards for power quality. It may be possible over time to implement a standardized methodology to measure and monitor power quality if distributors were to incorporate sensors on their systems that would allow for the appropriate collection of such data.

3. Customer Specific Reliability

- a. **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? 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)?**

As described above, system average indexes tend to mask the worst performing feeder and areas within a distribution system. The OEB could consider implementing measures such as “CEMI” (Customers Experiencing Multiple Interruptions) as well as “CELID” (Customers Experiencing Long Interruption Duration) measures.

In Alectra’s view, the consequence that should result when reliability performance expectations are not met should be greater regulatory support for infrastructure investments that seek to enhance such performance or mitigate further deterioration of performance. The OEB should provide utilities with support to proactively fund renewal before reliability performance deteriorates in the first place. Customers should not have to experience deteriorating performance in order to justify increased investment in system renewal.

4. Utility Planning

- a. **How should reliability data be enhanced to support effective utility planning and rate setting? Are there any established methodologies to quantify the value, from a reliability perspective, added by transmission and/or distribution investments?**

Alectra Utilities has established several targets in its DSP to maintain reliability levels based on specific cause codes (e.g., defective equipment – underground cables), matching the pace of

renewal to the pace of asset condition deterioration, as well as storm hardening the infrastructure to withstand the increasing number, and magnitude, of storms experienced.

Alectra has established a quantitative measure to calculate the dollar value of the customer interruptions based on metrics developed by the University of Saskatchewan, published in 2008. Alectra determines the dollar value for each outage avoided in order to target enhancement activity.

Alectra appreciates the opportunity to provide these comments for the OEB's consideration. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,



Michael Lister, MBA, CFA
Acting Vice President, Regulatory Affairs
Alectra Utilities Corporation