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January 21, 2022

Ms. Christine E. Long
Registrar
Ontario Energy Board
2300 Yonge Street, 27th floor
Toronto, ON M4P 1E4

Dear Ms. Long:

**Re: Reliability and Power Quality Review
Ontario Energy Board File Number: EB-2021-0307**

On November 30, 2021, the Ontario Energy Board ("OEB") initiated a consultation to review reliability and power quality in the Ontario electricity sector. As part of the consultation, the OEB has invited interested parties to provide input on the issues that should be addressed as part of the review and the approach that should be taken to address those issues. Toronto Hydro-Electric System Limited ("Toronto Hydro") welcomes the OEB's consultation and is eager to clarify definitions to avoid potential reporting misalignments, and further explore reliability and power quality in the context of meeting customers' increasingly heterogenous preferences and expectations in this regard. Toronto Hydro looks forward to participation in any further phases of this consultation and offers its views on the OEB's preliminary guiding issues below.

Approach and Prioritization

In reviewing the issues and potential issues that are likely to be addressed through this consultation, Toronto Hydro submits that most can generally be categorized into one of two groups, which would determine their prioritization and pace of completion.

Matters of definition, clarification, and treatment could be addressed within one group, as these would provide immediate benefit to current reporting and be addressed in relatively short order. OEB Staff identify three areas of consideration in this consultation under the heading of Utility Accountability, namely on issues of the treatment of "loss of supply" events, the definition of "Major Event Days", and

the use and definitions used for cause code reporting. Toronto Hydro believes these are all issues that could be addressed in a preliminary group, as they can be resolved relatively quickly and provide immediate benefits to the consistency and accuracy of ongoing reliability reporting

Issues of review, new tracking, or other more complex matters should be considered in a second group, as these are likely to take longer and require more in-depth consultation and analysis. These would include those issues noted by OEB Staff under the categories of Monitor Utility Performance, Customer Specific Reliability, and Utility Planning. In general, these issues all relate to potential new tracking and reporting requirements, or innovative policy considerations. Toronto Hydro supports the OEB's decision to review these topics more closely. In its experience – through both ongoing customer feedback as well as more formal customer engagement efforts - locally based customer specific issues are becoming increasingly prominent, with the variety and diversity of customer requirements leading to a greater utility need to offer diversified service offerings to meet customer expectations (e.g. different levels of reliability for customer for whom reliability is of particular importance). Toronto Hydro expects that exploring issues of performance and customer specific reliability in this consultation will help in considering and addressing these evolving customer needs.

Toronto Hydro does not expect that addressing the second group of issues would be conditional on the first, and so could to some degree proceed in parallel provided issues of stakeholder workload and scheduling are addressed.

Toronto Hydro supports a process leveraging written comment, using stakeholder sessions on an as-needed basis. The complexity of the issues to be addressed within the second group may require additional stakeholder sessions or a working group, prior to engaging for written comments.

Utility Accountability

OEB Staff identify three areas of consideration that would be intended to improve utility accountability, namely on issues of the treatment of "loss of supply" events, the treatment and definition of "Major Event Days", and the use and definitions used for cause code reporting.

On the issue of loss of supply, Toronto Hydro suggests that a targeted approach may be most appropriate. Toronto Hydro's own outages caused by loss of supply are only 6% of its 2020 SAIDI, and 12% of its 2020 SAIFI, well below the 50% cited by OEB Staff as the province wide figure, and far from

the predominant cause of outages within its service territory. Reviewing the OEB's recent Yearbook data, Toronto Hydro suspects that this may be the case for many other utilities, and that only a small fraction face loss of supply as a dominant issue, which in turn drives up the provincial average. Given this variability, Toronto Hydro suggests that any loss of supply concerns would more appropriately be addressed on a utility basis, for those specific utilities for which loss of supply constitutes a dominant cause of outages. A province wide approach for all utilities involving expanded reporting, which would cover many utilities for which loss of supply is in immaterial cause, may be administratively and operationally unnecessary.

Toronto Hydro agrees with OEB Staff that the definition of "Major Events" should be clear, to ensure accurate reporting and consistent treatment across utilities. Toronto Hydro notes that the OEB established IEEE Standard 1366 as the "default approach" to Major Events in its 2016 review¹ of reliability reporting, and would be supportive of its continued use. With regard to restoration, Toronto Hydro notes that the process of restoring power following Major Events depends on many factors, variables, and the specific conditions that existed during the event (e.g. volume of individual events, magnitude of damage per event, timing – did the event occur during a work day or on a weekend?, were there any field safety concerns that impeded or delayed response efforts?, etc.). Over the past decade, and with extensive experience during the 2013 ice storm and other events in the years that followed, Toronto Hydro has continued to enhance its restoration capabilities to consider itself a strong performer in this regard. Reviewing the "effectiveness" of outage restorations following Major Events will always likely be a matter of trade-offs with a quicker response requiring additional cost, and the optimal balance between response time and cost a matter of preferences for local customers and stakeholders, and affected by the inherent system design and operating structure of the utility. Given these variations in preferences and operating circumstances, moving towards a more prescriptive uniform approach for all utilities in dealing with Major Event outages may not necessarily lead to favourable outcomes for all customers.

Toronto Hydro also agrees that cause code reporting definitions could be improved to remove ambiguity and subjectivity, with input and agreement from industry stakeholders. On the example cited of adverse weather vs. tree contact, Toronto Hydro has always viewed the triggering event to be weather in circumstances in which a tree makes contact as a result of weather. Alternatively, it may be worthwhile

¹ EB-2014-0189 - Amendments to the Reporting and Record Keeping Requirements Regarding System Reliability, May 3, 2016.

to explore the concept of adverse weather not as an individual cause code, but a secondary data point that could be applied to all cause code as a contributing factor.

Monitor Utility Performance

OEB Staff raise the concept of developing benchmarking reliability to allow comparison across utilities, as well as proposing reporting for power quality and MAIFI.

While analyzing utility performance data over time can be a helpful gauge in assessing general reliability trends for individual utilities, directly comparing reliability performance between utilities is challenging as it is very much a function of geography and system design (in addition to weather and reporting capabilities). While local SAIFI and SAIDI can be successfully benchmarked across different utilities, it can be a misleading indicator without considering and adjusting for local factors (geography, density, weather patterns, etc). A comparison of utilities based on similar characteristics (dense urban, suburban, rural, etc.) or similar service areas may allow for more meaningful benchmarking as within those groups. This is essentially the status quo in the rate applications context, with utilities seeking similar peers and comparators (both within and outside the province) and adjusting for variables through econometrics, as a gauge of their own performance.

In terms of monitoring and regulating power quality, Toronto Hydro submits that it is far more important to focus on specific outliers and exceptions, rather than averages. Power quality is generally only a major issue to customers of a certain size, typically 1MW or larger, and in many cases operating within specific industries with equipment sensitive to power quality. Reporting of power quality and MAIFI is also dependent on the utilities' infrastructure (i.e. MAIFI can only be identified if the circuit breaker is a telemetered SCADA device, and power quality at a customer location requires power quality meters which are typically only accessible to large customers). In this context, tracking or attempting to maintain system or sub-system wide averages such as MAIFI would not be meaningful, as infrastructure limitations may prevent comprehensive reporting, and/or quality issues at certain sites may nonetheless persist and be offset by high power quality in areas serving customers for which power quality is not a major concern or benefit. Toronto Hydro submits that given the localized nature of power quality issue, power quality should continue to be addressed through targeted localized solutions. Any additional reporting of power quality issues should strictly focus on minimum standards or events that violate IEEE guidelines. It is also worth considering that power quality issues experienced on the distribution system

often originate with the transmitter, and optimal solutions may be at the customer, transmitter, or the distributor level, diluting the value of distribution level monitoring and reporting .

Customer Specific Reliability

OEB Staff consider the need for customer-focused reliability measures that can provide greater transparency on the level of service individual customers are receiving, along with potential consequences when reliability performance expectations are not met .

Individual customer reliability is partly a function of customers' specific supply configuration, and often customers will choose a less costly supply option at the time of connection versus a more expensive option offering higher reliability (network supply, automated transfer switch, etc). Such self selected discrepancies as between customers, in addition to other environmental factors that may make certain customers more prone to disruptive events (e.g. geography, susceptibility to weather events, etc), making tracking and comparing individual customer service levels inappropriate in the current context.

However, the ability for utilities to offer higher reliability levels for those customers who require and are prepared to fund them is a concept that should certainly be explored. Offering and maintaining an enhanced (i.e "higher reliability") service for certain customers would allow utilities to diversify their offerings by providing different customer groups with differing preference the targeted service reliability levels that best suit them.

Utility Planning

OEB Staff asks stakeholders for their views as to how reliability data should be enhanced to support effective utility planning and rate setting. Reliability is a lagging indicator, and while helpful in assessing a utility's performance over time, Toronto Hydro submits that the focus on utility planning should remain based primarily on asset performance. This is particularly the case with system averages like SAIDI and SAIFI, which while indicative of overall historic system performance, do not materially help in planning the overall need, scale, or scope of future investments. For such forecasting, much more localized performance metrics at a feeder level, or even asset specific metrics, are relied upon by Toronto Hydro and other utilities to determine and support optimal investment decisions. Toronto Hydro expects that most utilities already collect various data points to support their system planning and project selection decisions (e.g. asset ages, failure rates on individual asset basis, reliability at a

localized feeder level , etc.) but such data points would not provide meaningful value if reported or compared outside an individual project evaluation and beyond the rate setting context.

Toronto Hydro asks that all future correspondence on this matter be directed to the email address:
kruch@torontohydro.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kaleb Ruch", written over a horizontal line.

Kaleb Ruch
Manager, Government Relations
Toronto Hydro-Electric System Limited

KR/jl