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BY EMAIL AND WEB POSTING

January 30, 2024

**TO: All Licensed Electricity Distributors
All Participants in Consultation Process EB-2021-0307
All Other Interested Parties**

RE: Implementing Voluntary Feeder-Level Reliability Reporting (Reliability and Power Quality Review EB-2021-0307)

As part of its ongoing [Reliability and Power Quality Review \(RPQR\)](#) consultations, the Ontario Energy Board (OEB) is providing for new voluntary reporting by distributors on reliability data at the distribution feeder level. The OEB expects this information will be supportive in building customer awareness and understanding about the reliability of their distributor's services. Distributors that have the available information are encouraged to report feeder-level reliability in April 2025 for the 2024 calendar year. This letter outlines the rationale for the new provision and the reporting details.

Background

Launched in November 2021, the OEB's RPQR initiative aims to establish a comprehensive regulatory framework for enhancing electricity sector reliability and power quality performance. Following valuable input from customers and stakeholders, the OEB established four overarching objectives for the RPQR:

- Enhance distributor accountability by refining reliability reporting and gathering data on power quality;
- Encourage continuous improvement through performance benchmarking;
- Increase transparency by collecting customer-specific reliability information; and
- Support informed investment decisions by developing reliability analytics that connect reliability with utility planning and in rate applications.

To support the RPQR initiative a working group of customer representatives, a transmitter, and distributors (RPQR Working Group) was established to provide OEB staff with advice and technical input. Recognizing the complexity of the initiative, the OEB is taking a phased approach, with Phase 1 focused on enhancing accountability

through improving the accuracy and consistency of reliability data reporting by electricity distributors. Phase 2, which started in April 2023, has included work on improving transparency through reporting customer-specific reliability (CSR) information.

Customer Specific Reliability Reporting

Currently, distributors report to the OEB on their reliability performance through SAIDI and SAIFI¹ measures. These measures evaluate system reliability by averaging the total duration and frequency of interruptions experienced by all customers in a distributor's service area.

At the beginning of the RPQR initiative, the OEB conducted a survey and sought input from Ontario residents and businesses to define the scope of the consultation. Customers expressed an interest in gaining a better understanding of the reliability they were experiencing in comparison to the overall system average.²

In May 2023, to understand distributor readiness for collecting and reporting CSR data, OEB staff invited distributors to participate in a CSR survey to obtain information regarding their readiness to collect and report various types of reliability data beyond the system level. A total of 38 distributors participated in the survey, the results of which revealed that 27 distributors currently collect and use feeder-level reliability data (see Appendix A). Furthermore, the survey results made it clear that very few distributors have the capability to track and report reliability data at more granular levels, such as reliability data at the individual customer level. However, this is expected to change over time as new technology such as second-generation smart meters are rolled out across distributor's service areas.

A review of the survey results led the RPQR Working Group to focus on a phased approach to CSR reporting that aligns with the capabilities and readiness of distributors. With the understanding that many distributors already collect and use feeder-level reliability data, the RPQR Working Group has concentrated on this as a mechanism to provide customers with greater awareness of local reliability.

Feeder-Level Reliability

Feeder-level reliability data allows distributors to identify specific feeders in the network that might be experiencing issues. This is consistent with what the distributors told the OEB in the CSR survey where "*feeder-level reliability data provides a more granular*

¹ SAIDI and SAIFI are System Average Interruption Duration Index and System Average Interruption Frequency Index, respectively.

² [Residential and business customer survey result summary](#).

view into distributors' system needs and helps with the development of capital and maintenance plans." The OEB believes that distributors can also leverage this information to utilize distributed energy resources (DERs) to address local reliability issues.

Information about feeder-level reliability provides information that is more specific to customer's location. Access to locational reliability data will allow customers to better assess the value of making investments to be able to address reliability impacts on their businesses and residences, such as installing battery storage or generation facilities. This type of reliability information may also support a distributor's request for funding either through a rebasing rate application or incremental capital module mechanism application. Based on the results of the survey, providing feeder-level data is much less effort for the distributor, as compared to providing customers with their individual reliability data.

Feeder-level reliability information can also assist the OEB in developing a comprehensive understanding of the variations in reliability performance across the province and assessing distributor investment decisions concerning reliability improvements.

As noted, 27 distributors (see list in Appendix A) responded to the OEB staff survey indicating they currently collect and use feeder-level reliability data in their planning and operations. This presents an opportunity to implement the new reporting on a voluntary basis without causing immediate costs for distributors that currently do not collect feeder-level data. The OEB expects distributors that currently collect and use the feeder-level data will be in a position to provide their customers and the OEB with such data, supporting increased awareness and driving performance, in accordance with the OEB's strategic goals and mandate. These distributors are not likely to require significant changes to systems or processes in order to provide reporting on their feeder-level reliability to the OEB. Further, distributors that currently have this information should expect that it may be requested in other regulatory processes such as rates or MAADs applications or compliance reviews if it is not part of their annual Electricity Reporting & Record Keeping Requirements (RRR) submissions. Specific measures that will be included in the voluntary reporting include FAIFI (Feeder Average Interruption Frequency Index) and FAIDI (Feeder Average Interruption Duration Index). For this reporting, a feeder means a set of conductors owned by the distributor serving customers in a local area within the distributor's service territory. The feeder can be connected directly to a transformer station or to a host distributor's feeder. Details of what is being requested through the voluntary feeder-level reporting are provided in Appendix B.

The voluntary reporting would be applicable to both host and embedded distributors. Distributors that report feeder-level reliability data should only report interruptions solely within their service areas. This means that distributors should not report customer interruptions occurring upstream or downstream of their feeder section. In other words, their reporting should be confined to the feeder reliability exclusively within the feeder section under their ownership. Consistent with SAIDI and SAIFI reporting, distributors will also be asked to report interruptions caused by major events and loss of supply separately.

This voluntary approach will allow the OEB to assess the results of the reporting and make any necessary adjustments before considering mandating the reporting of feeder-level reliability data for all distributors.

Next Steps

The reporting of feeder-level reliability will follow the existing process for submissions under the RRR. Feeder-level reporting will be included as a new section within the distributor's annual RRR submission. Distributors that have the available information are encouraged to start reporting feeder-level reliability data in April 2025 for the 2024 calendar year. Details regarding the process for filing this voluntary reporting will be provided as part of the 2025 RRR system update. If you have any questions regarding this letter, please contact Industry Relations at IndustryRelations@oeb.ca.

Yours truly,

Brian Hewson
Vice President
Consumer Protection and Industry Performance

Attachments:

Appendix A — List of Distributors Currently Track Feeder-Level Reliability
Appendix B –Voluntary Feeder-Level Reliability Reporting

Appendix A
List of Distributors Currently Collecting Feeder-Level Reliability Data

1. Sioux Lookout Hydro Inc.
2. Entegrus Powerlines Inc.
3. Festival Hydro Inc.
4. Milton Hydro Distribution Inc.
5. Niagara-on-the-Lake Hydro Inc.
6. Synergy North Corporation
7. Hydro Hawkesbury Inc.
8. Hydro 2000 Inc.
9. Greater Sudbury Hydro Inc.
10. Centre Wellington Hydro Ltd.
11. Hearst Power Distribution Co.
12. Lakeland Power Distribution Ltd.
13. Orangeville Hydro Limited
14. Kingston Hydro Corporation
15. Welland Hydro Electric System Corp.
16. London Hydro Inc.
17. Enova Power Corp.
18. Algoma Power Inc.
19. Canadian Niagara Power Inc.
20. Hydro Ottawa Limited
21. GrandBridge Energy Inc.
22. Elexicon Energy Inc.
23. Alectra Utilities Corporation
24. Niagara Peninsula Energy Inc.
25. Hydro One Networks Inc.
26. ERTH Power Corporation
27. Toronto Hydro-Electric System Limited

Appendix B Voluntary Feeder-Level Reliability Reporting

Where a distributor has determined that it will report feeder level reliability, it would be expected to provide the following data if available, however filing a portion of this data is also encouraged if data for all feeders is not available:

- (a) Name of the Station
- (b) Name of the Feeder
- (c) Feeder Average Interruption Frequency Index (FAIFI)
 - i. Total number of customer interruptions occurred on the feeder in the year;
 - ii. Average number of customers served by the feeder in the year³; and
 - iii. FAIFI is i./ii.

- (d) Feeder Average Interruption Duration Index (FAIDI)

- i. Total number of customer-hours of interruptions in the year;
 - ii. Average number of customers served by the feeder in the year; and
 - iii. FAIDI is i./ ii.

- (e) Feeder Average Interruption Frequency Index (Loss of Supply Adjusted)

This index adjusts FAIFI for the effects of interruptions caused by Loss of Supply, and is calculated in the same way as described in section (c), except that the total number of customer interruptions caused by Loss of Supply events is deducted from the total customer interruptions.

- (f) Feeder Average Interruption Duration Index (Loss of Supply Adjusted)

This index adjusts FAIDI for the effects of interruptions caused by Loss of Supply, and is calculated in the same way as described in section (d), except that the total customer-hours of interruptions caused by Loss of Supply events is deducted from the total customer-hours of interruptions.

- (g) Feeder Average Interruption Frequency Index (Major Event Adjusted)

This index adjusts FAIFI for the effects of interruptions caused by Major Events, and is calculated in the same way as described in section (c), except that the total number of customer interruptions caused by Major Events is deducted from the total customer interruptions.

³ The "Average number of customers served by the feeder" is calculated by adding the total number of customers served by that feeder on the first day of the year and the total number of customers served by that feeder on the last day of the year and dividing by two.

(h) Feeder Average Interruption Duration Index (Major Event Adjusted)

This index adjusts FAIDI for the effects of interruptions caused by Major Event, and is calculated in the same way as described in section (d), except that the total customer-hours of interruptions caused by Major Events is deducted from the total customer-hours of interruptions.