Ontario Energy Board | Commission de l'énergie de l'Ontario

BY EMAIL AND WEB POSTING

January 28, 2025

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

RE: Setting Reliability Performance Targets (Reliability and Power Quality Review EB-2021-0307)

The Ontario Energy Board (OEB) is introducing an enhanced approach to setting reliability performance targets for all rate-regulated electricity distributors. The new methodology will strengthen customer protection and encourage distributor performance improvement as the energy transition unfolds and customers increasingly rely on the electricity system.

These enhanced performance targets will be applied to distributors' performance scorecards when they submit rebasing applications, starting with applications filed in 2026, for determination of rates effective in 2027. This will allow distributors to incorporate new performance targets into their system and investment planning. Similar to the current scorecard approach, each year the actual reported reliability results of the distributor will be shown on the scorecard along with the distributor's reliability targets, providing transparency regarding the distributor's performance.

This letter provides an overview of the methodology that will be used to establish reliability performance targets, including details on the OEB's newly developed benchmarking methodology.

1. Background

Reliability is fundamental to customer satisfaction and strengthens trust in the electricity sector. Ensuring reliable service is a key part of the OEB's mandate to protect consumers' interests.

The OEB initiated its Reliability and Power Quality Review (RPQR) consultation, with four objectives that align with its strategic goals of protecting the public interest and driving energy sector performance, including:

- Enhancing utility accountability to customers;

- Encouraging continuous improvement;
- Increasing transparency; and
- Supporting investment decisions.

In 2022, the OEB conducted a survey to support its RPQR work, gathering input from Ontario residential, commercial and industrial customers about their expectations for electricity system reliability. The survey revealed that customers want a better understanding of their distributor's system reliability. Additionally, 80% of respondents stressed the importance of knowing how their distributor's reliability compares to others in Ontario.[1] To date, the RPQR initiative has focused on improving reliability data reporting by enhancing the transparency, accuracy and consistency of data collected from distributors, including feeder-level reliability reports.

The current approach to assessing distributors' reported reliability results on their annual performance scorecards was established in 2015.[2] Under this approach, a distributor's annual reliability performance is reported as a five-year historical average of the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). These indices measure a distributor's system-wide reliability by averaging the total duration and frequency of interruptions experienced by all customers in the distributor's service area, with a lower index score indicating higher reliability.

This current approach to reliability performance reporting, which is based solely on a distributor's historical performance, has limitations in meeting evolving system and customer needs. More specifically, it often reinforces the status quo rather than encouraging improvement. Over time, factors such as evolving technologies, changing customer expectations, and external challenges like weather events have impacted reliability performance. With the ongoing energy transition and growing customer reliance on electricity services, there is the need for a more proactive and adaptive approach to setting targets that align with the OEB's mandate and work to drive sector performance.

As part of the RPQR consultation, the OEB established a working group (the Working Group) to assist OEB staff in the development and implementation of policy changes under the RPQR. Through the work of the RPQR Working Group and taking customer input into consideration, the OEB recognizes that the energy transition requires moving beyond the status quo to a framework that fosters long-term system resilience and continuous performance improvement. OEB staff consulted with the Working Group to develop and refine the methodologies for establishing enhanced performance targets, including developing a benchmarking methodology that supports the target setting. The

[1] Residential and business customer survey result summary.
[2] Report of the Board: Electricity Distribution System Reliability Measures and Expectations

OEB appreciates the Working Group's significant contributions to this work. The subsequent sections provide detailed explanations of the updated performance targets and the benchmarking methodology.

2. Reliability Performance Targets

Under the new methodology, a distributor's reliability performance targets will be calculated based on three components: (1) a baseline for each of SAIDI and SAIFI, which is based on the distributor's five-year average performance for each metric. These baselines will be adjusted by a percentage improvement factor, to be determined based on the distributor's (2) performance trend and (3) benchmarking results.

The enhanced target setting methodology will maintain the current approach of assessing distributors' performance through the system-wide SAIDI and SAIFI metrics. As per current practice, interruptions related to major events and loss of supply will be excluded from performance assessment data to ensure the performance targets reflect conditions within a distributor's planning purview. This approach has been designed to minimize regulatory burden on distributors by leveraging the reliability data they already report.

Starting with rebasing applications filed in 2026, the OEB will assign distributors reliability performance targets for both SAIDI and SAIFI. Prior to setting these targets, the OEB may revise the adjustment parameters outlined in sections 2.2 and 2.3 of this letter, to incorporate 2024 data, once available. Although this methodology will be used to set targets for all distributors, each distributor may propose alternative targets for the OEB's approval, based on its investment plan submitted with a rebasing application, consistent with current practice.

The following sections detail the OEB's new default methodology for calculating each component.

2.1. Baseline

The baseline for each of SAIDI and SAIFI will be the five-year average of a distributor's reliability performance. Distributor members of the Working Group emphasized that any target setting approach needed to be based on the distributor's actual performance because of the influence of the distributor's existing assets, customer base and operating conditions on its reliability performance.

Baselines will be updated at the distributor's next rebasing application or when submitting a distribution system plan. This approach will account for recent reliability performance. This approach to setting the baseline recognizes the importance of both the current operational characteristics and business conditions of each distributor when

establishing their individual reliability performance targets. The method for setting the baselines is the same as the current scorecard approach, which ensures they are understood in the sector and that no incremental effort is required from distributors.

2.2. Performance Trend

Recognizing that a distributor's actual performance is a strong indicator of its future reliability performance, to encourage improvement the OEB will use the trend in a distributor's historical performance as the primary adjustment in determining its performance targets. An adjustment factor will be applied to each of the SAIDI and SAIFI baselines to reflect the distributor's historical performance trend over the previous five-year period.

The distributor's reliability performance trend for each of the reliability targets will be calculated based on the linear trend of SAIDI and SAIFI and applying specific adjustments based on the results of the trend analysis. If a distributor's past reliability performance shows a significant deteriorating trend – indicated by a SAIFI trend or a SAIDI trend greater than 0.1[3] – a 1% adjustment factor will be applied to the relevant reliability target. Where a distributor's past reliability performance shows a slight deteriorating trend or an improving trend – indicated by a SAIFI trend or a SAIDI trend less than 0.1 – a 0% improvement target will be applied to acknowledge their progress towards a positive trajectory.

The adjustment parameters have been developed through an analysis of distributors' historical performance data, taking into account the predictive value of past performance and anticipated changes in the future as a result of the energy transition and need for enhanced system resilience. These parameters were discussed with the Working Group and its feedback has been considered. The OEB may revise the adjustment parameters after undertaking an analysis that incorporates the latest 2024 data, once available.

2.3. ***Benchmarking Results***

To account for differences in operational characteristics and enable comparison among similarly situated distributors, a second adjustment to the baseline will be made that is based on a distributor's performance relative to its peer group while accounting for the distributor's historic performance trend. The second adjustment to the baselines will be driven by the results of the OEB's newly developed reliability benchmarking

[3] The trend value of 0.1 represents the trend in SAIDI and SAIFI performance over five years. These trend values are determined based on the formula y=bx+a, which represents the linear trend of SAIFI or SAIDI using the least squares method. y is SAIDI or SAIFI values, x is year, b is the trend value representing the rate of SAIDI or SAIFI change over time, and a is the intercept.

methodology.

By integrating benchmarking into the setting of performance targets, customers will gain valuable insights into how their distributor is performing relative to others. Benchmarking also introduces a consideration of reliability performance for similar communities and comparable distributors in terms of reliability for customers.

This approach also encourages distributors to evaluate their performance against others, identifying areas for improvement. Reliability benchmarking also offers a valuable tool for the OEB in assessing the effectiveness and value of reliability investments proposed by distributors as part of their rebasing applications.

These outcomes – improved consumer awareness and ensuring value in reliability investments – align with the OEB's strategic goals of driving energy sector performance and protecting the public, as set out in its 2024-2027 Business Plan.

Distributors excelling relative to their peers – indicated by their performance falling below the group average - would have a 0% adjustment factor, reflecting already strong performance. Distributors underperforming relative to their peers – indicated by their performance fall above the group average - will be assigned a percentage improvement target, encouraging them to improve performance.

Specifically, for distributors demonstrating an improving historical trend, a 0.25% adjustment factor will apply if their performance is within one standard deviation of the group average, while a 0.5% adjustment factor will be applied if their performance falls beyond one standard deviation from the group average.

For distributors with a deteriorating historical trend, a 0.5% adjustment factor will be applied if their performance is within one standard deviation of the group average, while a 1% adjustment factor will apply if their performance falls beyond one standard deviation from the group average.

The OEB may revise the adjustment parameters after undertaking an analysis incorporating the latest 2024 data.

Peer Group Explanation

The Working Group thoroughly reviewed and evaluated several benchmarking methods, including econometric and clustering approaches, before settling on the peer group method. The other approaches were considered by Working Group members to be less transparent, and in particular, some of the suggested parameters for identifying groups were disputed as not being reflective of a distributor's reliability related business and operating conditions.

The peer group approach assigns distributors into groups based on specific parameters that reflect comparability among distributors within the group. It was chosen because it produced reasonable benchmarking results and is easily understandable by distributors, customers and other interested stakeholders.

Under this approach and based on input from the Working Group, distributors are assigned to peer groups based on three key parameters. These parameters reflect operational conditions as well as weather-related considerations that can significantly impact distributors' SAIDI and SAIFI scores, and which are generally beyond distributors' control. The following characteristics have been considered in establishing peer groups:

- **Geographic region:** Based on distributors' service territory, with the province divided into southwestern, southern, northern, and eastern regions.
- **Total customers**: Based on the distributor's average number of customers served. Distributors are classified into three categories: very large, large, and small. A distributor is considered very large if it serves over 300,000 customers, large if it serves over 30,000 customers, and small if it serves fewer than 30,000 customers.
- **Undergrounding level:** Based on the proportion of underground lines, with a 35% threshold to differentiate between high and low levels of undergrounding. This threshold represents the provincial median of undergrounding levels across all distributors.

Proposed peer groupings are presented in an Appendix to this letter.

Some members of the Working Group suggested incorporating additional parameters into the benchmarking framework such as asset condition and system configuration. Others advised that those factors are controllable by distributors through their investment plans and system design. Having considered different views, adopting peer groups that are designed to account for the above business conditions ensures that comparisons reflect key factors impacting distributors' reliability performance and are not overly complicated to explain or assess. The OEB may consider including additional parameters in the future as relevant data becomes available.

2.4. Alternative Distributor Reliability Targets

Enhanced performance targets calculated using the methodology described above will be used by the OEB in assessing a distributor's reliability and its planning and investments. However, in keeping with the current reliability scorecard mechanism, a distributor may propose alternative targets to align with its proposed investment plans in their rebasing applications or when submitting a distribution system plan. The OEB will consider evidence-based justifications for adjusted targets, which can include a

distributor's planned capital and operating expenditures, as well as results from customer consultations.

3. Implementation Plan

Performance targets are expected to be an input to distributors' investment planning and operational plans as they develop their rate applications. The OEB wants to ensure distributors are taking these targets into consideration in their planning and will use the rebasing application process to evaluate how they have done so. Therefore, the effective date for implementing the new performance expectation setting will be tied to the timing of each distributor's rebasing application.

Starting with rebasing applications filed in 2026, for determination of rates effective in 2027, the OEB plans to post a distributor's default performance targets. For distributors filing rebasing applications for 2027 rates, the OEB-approved performance targets (whether default or distributor-specific) will be integrated into their scorecards. This timeline also aligns with the planned implementation schedule of the OEB's vulnerability assessment and system hardening project.

Working Group members expressed concerns about potential rate increases associated with distributors' meeting the performance targets under the new methodology. Distributors should take into account rate impacts and customer perspectives gathered through their customer engagement processes as they plan and pace any reliability related investments. Allowing distributors to propose alternative targets aligning their performance with their investment plans provides an opportunity to balance reliability improvements with reasonable rate impacts.

In consideration of the potential impact on rates, the default expectations will be set with modest performance improvements in mind to ensure expectations are both reasonable and achievable. Data from 2020 to 2024 will be used to develop the baseline, benchmarking results, and default expectations for distributors filing rebasing applications for 2027 rates. The adjustments derived from a distributor's historical performance trend and benchmarking results will remain fixed for five years. These fixed adjustments will be applied to the baseline on a compound basis for each year over the five-year rate-setting period (2027-2031). As a result, performance targets for the entire rate-setting period will be known to distributors in advance, enabling them to develop investment plans accordingly when preparing rebasing applications for 2027 rates.

For rebasing applications beyond 2027 rates, the OEB will update the historical trend and benchmarking results to ensure that performance expectations for post-2027 rate applications reflect the most current data. For example, rebasing applications for 2028 rates will use data from 2021 to 2025 to determine the performance targets.

For distributors who are not filing rebasing applications for 2027 rates, including distributors who are on the Annual Incentive Rate-setting Mechanism or on a deferred rebasing schedule after a consolidation application, the existing scorecard approach – based on the historical five-year average – or specific expectations established through their rebasing applications will remain in effect until their next rebasing application.

The OEB will conduct annual comparisons of a distributor's actual performance against established targets. Like the current scorecard approach, the annual outcomes of this assessment – indicating whether a distributor meets the annual reliability targets – will be displayed on the distributor's scorecard.

If you have any questions regarding this letter, please contact Industry Relations at IndustryRelations@oeb.ca.

DATED at Toronto, **January 28, 2025**

ONTARIO ENERGY BOARD

Brian Hewson
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Attachments:

Appendix – Reliability Benchmarking – Peer Groupings

Appendix –
Reliability Benchmarking – Peer Groupings[4]
January 28, 2025

Very Large with High Undergrounding	Southwestern Large with High Undergrounding
Hydro Ottawa Limited	Essex Powerlines Corporation
Alectra Utilities Corporation	London Hydro Inc.
Toronto Hydro-Electric System Limited	Entegrus Powerlines Inc.
Southern Large with High Undergrounding	ENWIN Utilities Ltd.
Oakville Hydro Electricity Distribution Inc.	**Southwestern Small with High Undergrounding**
Milton Hydro Distribution Inc.	Orangeville Hydro Limited
Newmarket-Tay Power Distribution Ltd.	Centre Wellington Hydro Ltd.
Niagara Peninsula Energy Inc.	Tillsonburg Hydro Inc.
Oshawa PUC Networks Inc.	Grimsby Power Incorporated
Burlington Hydro Inc.	E.L.K. Energy Inc.
Enova Power Corp.	Festival Hydro Inc.
GrandBridge Energy Inc.	Niagara-on-the-Lake Hydro Inc.
Elexicon Energy Inc.	**Southwestern Small with Low Undergrounding**
Southern Small with High Undergrounding	ERTH Power Corporation
EPCOR Electricity Distribution Ontario Inc.	Wasaga Distribution Inc.
InnPower Corporation	Welland Hydro-Electric System Corp.
Halton Hills Hydro Inc.	Wellington North Power Inc.
Eastern	Westario Power Inc.
Cooperative Hydro Embrun Inc.	Canadian Niagara Power Inc.
Lakefront Utilities Inc.	Bluewater Power Distribution Corporation
Ottawa River Power Corporation	**Northern Small**
Hydro Hawkesbury Inc.	Lakeland Power Distribution Ltd.
Kingston Hydro Corporation	Hearst Power Distribution Company Limited
Hydro 2000 Inc.	Fort Frances Power Corporation
Rideau St. Lawrence Distribution Inc.	Sioux Lookout Hydro Inc.
Renfrew Hydro Inc.	Atikokan Hydro Inc.
Northern Large	Northern Ontario Wires Inc.
Greater Sudbury Hydro Inc.	Algoma Power Inc.
PUC Distribution Inc.	**Provincial**
Synergy North Corporation	Hydro One Networks Inc.
North Bay Hydro Distribution Limited	Provincial Average

[4] 53 rate-regulated distributors in total. The distributors not included in the benchmarking: Attawapiskat Power Corporation, Fort Albany Power Corporation, Kashechewan Power Corporation, Cornwall Street Railway Light and Power Company Limited, and Hydro One Remote Communities Inc.