

Hydro Ottawa Limited
3025 Albion Road North, PO Box 8700
Ottawa, Ontario K1G 3S4
Tel.: (613) 738-6400
Fax: (613) 738-6403
www.hydroottawa.com

Hydro Ottawa limitée
3025, chemin Albion Nord, C.P. 8700
Ottawa (Ontario) K1G 3S4
Tél. : (613) 738-6400
Télééc. : (613) 738-6403
www.hydroottawa.com



September 17, 2010

Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yong Street, 27th Floor
Toronto ON M4P 1E4

**Subject: Initiative to Develop Electricity Distribution System Reliability Standards
Board File #: EB-2010-0249**

Dear Ms. Walli:

In response to the Board's initiative to develop electricity distribution reliability performance standards, Hydro Ottawa is pleased to provide the following information, in response to the questions raised in Attachment A:

Q1 - In addition to SAIDI, SAIFI and CAIDI, what, if any, other system reliability measures do you use?

A1 – In addition to SAIDI, SAIFI and CAIDI, Hydro Ottawa tracks the following information:

- MAIFI-Momentary Average Interruption Frequency Index
- FEMIn – Number of Feeders Experiencing Multiple Interruptions ("n" represents the number of feeders)

Further, Hydro Ottawa benchmarks year-to-year reliability performance against the results of the *Canadian Electricity Association Electric Power System Reliability Assessment*.

Q2 - Provide a detailed description of your methodology utilized to record SAIDI and SAIFI. Please include information such as:

- **The degree of use of automated event tracking from SCADA systems, as well as reliance on manual observations.**
- **Whether planned outages are tracked separately.**
- **The level of detail captured throughout a stepped restoration process to record the total customer duration impact.**

A2 – All outage information is manually tracked by System Operators who record all outage data in a central Outage Database. An initiative is underway to automate event details by integrating the Outage Management System ("OMS") and Geographic Information System ("GIS").

Details on restoration stages are captured in the database and include updates to customer counts as services are restored.

All event information entered into the central database is classified by primary and secondary causes, as defined by the Canadian Electricity Association (i.e. Loss of supply, Defective Equipment, Scheduled Outage etc.) Planned outages are captured and classified as "Scheduled Outages" within this context. In addition to identifying the primary and secondary outage causes, information and observations received from field staff involved in the restoration process, are also recorded.

Q3 - Do you use system reliability performance results in planning, investment and maintenance expenditures, as well as, establishing operation and maintenance procedures? Please explain.

A3 – Yes, system reliability performance results are regularly used in planning. Hydro Ottawa maintains a “Worst Feeder” listing, which identifies which feeders in the system have experienced the highest number of interruptions, customer interruptions and interruption hours. These feeders are then reviewed to identify deficiencies and make recommendations with regard to capital investments or maintenance activities that would improve reliability. Reliability also impacts the identification of normal open points in the distribution system.

Q4 - Do you identify and track the impacts of extraordinary events?

A4 – Extraordinary events are tracked through a major event day classification process. An analysis of Hydro Ottawa’s outage statistics is performed according to the IEEE Standards Association White Paper *Classification of Major Event Days*. The IEEE major event day classification is a method that classifies reliability data into two categories, normal days and major event days (“MEDs”).

The classification is performed using a statistical method called the “Beta Method” which is based on statistical analysis of daily, historical SAIDI data. IEEE defines major events as those events beyond the design or operating limits of a utility, such as major weather events, major substation events or unexpected catastrophic events such as an earthquake.

The intent of this method is to enable utilities to separately analyze the two classifications of data, in order to make sound, informed business decisions. Without the removal of MEDs, trending of reliability data may be misleading.

Q5 - What other actions do you take to manage system reliability performance?

A5- Several other actions are taken to manage system reliability performance. Within the service territory, Hydro Ottawa operates four geographically-disbursed work centers to reduce outage response times.

As part of the GIS system, mobile computers are being deployed to field staff so they can quickly access the technical information they require for fault finding and restoration. In addition, Hydro Ottawa has dedicated reliability crews that operate on a 24/7 basis.

On a daily basis, Hydro Ottawa’s System Office generates a “Daily Report” which lists all planned and unplanned system events from the previous day. This report is circulated to all staff with access to IT facilities.

Should you have any further questions, please contact the undersigned.

Yours truly,



Laurie Elliott
Manager – Regulatory Reporting and Compliance
613-738-5499 Ext 508