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September 17, 2010

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P. O. Box 2319
2300 Yonge Street
Toronto, Ontario
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Dear Ms. Walli:

Re: Initiative to Develop Electricity Distribution System Reliability Standards
Board File No.: EB-2010-0249

Enersource Hydro Mississauga Inc. ("Enersource") is pleased to provide below its responses to the Ontario Energy Board's questions in Appendix A of the Board's August 23, 2010 letter.

Q. 1) In addition to SAIDI, SAIFI and CAIDI, what, if any, other system reliability measures do you use?

Response:
In addition to SAIDI, SAIFI & CAIDI, we use SAIFI (MI) or the System Average Interruption Frequency Index (Momentary), which is the equivalent to MAIFI. SAIFI (MI) is defined by the Canadian Electrical Association (CEA) as the average number of interruptions per customer served per year for momentary interruptions (interruptions of duration less than one minute).

Q. 2) 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.*

Response:
The Enersource Control Centre uses the Integrated Operating Model (IOM). This is Outage Management software, supplied by Intergraph, which integrates our Geographical Information System (GIS) with our System Control and Data Acquisition System (SCADA) and captures the entire outage work flow from inception to completion.

The IOM displays the Enersource plant geographically and schematically using data from the GIS. Behind the graphics is information regarding the plant and customer. Other information such as critical customers is also displayed and searchable by Enersource's System Control Operators (SCO).

Customer outages are brought to Enersource's attention by either an alarm on the SCADA system or by phone calls received from customers stating that they have no power. Approximately 10% to 15% of the outage times and restoration steps are taken from the SCADA system and the balance from manual observations. If the SCADA shows that a station breaker has tripped, this information is electronically communicated to the IOM. The IOM then creates an event and generates an event number. All work dealing with this outage until the complete restoration of power is automatically logged for this event.

All of the outage events are tracked in our IOM against CEA outage cause codes. By using the CEA cause codes, we can easily extract planned and unplanned outages from the IOM.

The IOM system keeps track of the connectivity for the primary voltage of the entire distribution system. Each customer on our system is associated with a transformer. The IOM tracks interruptions and restorations of power to each transformer. Each outage event has a start time and date as well as restoration times for each step of the restoration process. Using the customer counts for each transformer, the IOM records the number of customers affected and restored for each step of the restoration process. From this, the IOM calculates the duration of outage affecting the customers for each step of every outage event. From the data from each step and our system customer counts, the IOM calculates our system SAIDI and SAIFI. The IOM system does not track outages on the secondary voltage.

Q. 3) Do you use system reliability performance results in planning, investment and maintenance expenditures, as well as establishing operation and maintenance procedures? Please explain.

Response:
Yes. For more than twenty years, Enersource has been using system reliability performance results in prioritizing our maintenance programs. We use system reliability reports on a daily, monthly, quarterly and annual basis. To help us shape our maintenance program, we have categorized all interruptions according to the ten CEA cause codes. We then subdivide some of these categories to better analyze our

data and help to focus our maintenance programs on the worst-performing components (i.e., cables, splices, lightning arrestors, etc.)

We list all interruptions by their cause code from highest to the lowest in terms of customer minutes and we also do a year over year comparison to identify the highest customer minutes contributor and changes in the system. By analyzing these reports, we have seen that the majority of our customer minutes are due to equipment failures. We then subdivide the equipment failures into sub-cause codes to help us prioritize and focus our maintenance effort.

Q. 4) Do you identify and track the impacts of extraordinary events?

Response:
Yes, major event reports are reviewed and posted on Enersource's intranet for awareness throughout our organization. Major outages are also communicated promptly to our management via email. Follow-up meetings are held with key operations staff to assess the impacts of major outages and develop recommendations for improvements.

Q. 5) What other actions do you take to manage system reliability performance?

Response:

a. We have a control centre that is staffed 24 hours per day, seven days per week and trouble response and standby crews to respond to system and customer outages;
b. Remote supervisory switches as well as automated switches are installed at strategic points on our system to reduce restoration times;
c. Various fault indicators are installed on our system to help reduce outages times.
d. We have various inspection and infrared scanning programs to detect potential failures;
e. System modeling is done as part of the system planning process to ensure that we continually reinforce our system to account for new development and increasing loads; and
f. We continually improve our installation standards and have a stringent materials approval process to ensure that all new installations and upgrades are robust and help to improve system reliability.

Sincerely,

Original signed by

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