Norfolk Power
IN BUSINESS TO SERVE.

September 16, 2010

Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street,
Toronto, ON
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Attn: Kirsten Walli
Board Secretary

Re: Electricity Distribution System Reliability Standards – EB-2010-0249

Dear Ms. Walli,

In response to the Board's request in the letter of August 23, 2010, outlined in Attachment "A", we wish to reply to the questions regarding our current practises. Our response follows each italicized question.

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

  To better judge the impact of short term outages on our voltage sensitive customers, we also measure MAIFI (Momentary Average Interruption Frequency Index) on each of our 27.6kV feeders. These figures are typically indicative of the number of feeder breaker reclosurer operations lasting less than a 50 cycle timeframe.

  On our lower voltage distribution feeders, the number of reclosure operations at each 4kV or 8kV station or feeder midpoint is monitored annually but do not contribute to the SAIDI or SAIFI statistics.

  The SCADA system installed on our 27.6kV feeders allows for continuous monitoring of voltage and current levels as well as station transformer loading. Less than half of our lower voltage stations are currently equipped with SCADA interface.

- *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.*

SAIDI and SAIFI statistics are gathered as per OEB guidelines. Automated event tracking from SCADA systems is not implemented. Each outage event is recorded manually through notification by the customer. Event cause and duration is logged via a database program and customers impacted are estimated over the entire duration of the outage. Feeder restoration through sectionalization is typically not practiced due to the low density of customers per feeder kilometer. Future automation of customer impact is anticipated through ODS (Operational Data Storage) inputs from the smart metering system and use of Outage Management Software (OMS) to more quickly identify isolation points. Proactive fault finding and sectionalizing will be viable upon this next step of systems integration.

- *Whether planned outages are tracked separately.*

  Planned outages are tracked separately and are included in our SAIDI and SAIFI calculations.

- *The level of detail captured throughout a stepped restoration process to record the total customer duration impact.*

  Stepped restoration is only practiced should an outage be estimated to extend beyond a typical four hour window. Details of stepped customer impact are typically captured only during normal working hours due to the availability of control room staff.

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

  As per our Asset Management Plan, we assess the condition of our plant through a variety of parameters to determine the best application of funds. Reliability measures, age of plant, vintage of installation and actual test results dictate where monies are required for maintenance, refurbishment or rebuild. A “worst” feeder performance review is completed to identify opportunities for improvement. A risk assessment is applied to areas identified as “below standard” and degree of investment is determined.

  Where it is applicable, areas of lower reliability are re-configured with supply from higher reliability feeders until full area rebuild or maintenance can be scheduled.

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

  Extraordinary outage events which cause substantial damage to plant such as ice storms and wind storms or events which cause system wide outages and are beyond our control (ie – vandal damage at Caledonia TS) are tracked through separate work orders to measure expense impact and are included in our reliability statistics. These could be filtered out to determine impact to overall stats.

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

  In addition to system wide performance measures, we also monitor condition of individual feeder performance and compare neighbouring substation performances.

Station and feeder contingency reviews are completed to ensure facilities are in place to recover from first contingency equipment failure within a reasonable timeframe.

There is significant attentiveness given to the performance of other neighbouring and similar urban/rural mix LDC's as well.

Should you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Brad Randall, P.Eng.
President & CEO

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