Q. (Technical Conference – Issue 2) With respect to the proposed transmission line 55L rebuild project, it is stated in the application "*in 2017 customers experienced an outage of approximately 4.5 hours due to a severe wind storm" and "Customers experienced a similar outage due to a wind storm in 2020*".

a) Please confirm that these 2 events resulted in 1.7 million customer minutes of outage (850,000 minutes of customer outage per event), and that this compares to 10 million minutes of outage over the past 20 years, or 500,000 minutes of customer outage per year, or 147 minutes of outage per customer per year (based on 3400 customers).

b) Are outages to Line 55L included in Newfoundland Power's system SAIDI/SAIFI statistics?

c) Are the 2 referenced wind storms judged to be severe storms for the purposes of calculating SAIDI/SAIFI statistics?

d) Would the rebuilt line maintain continuity of supply during such wind storms?

e) Are "hotline work methods using specialized resources" common industry practice in such circumstances? What "specialized resources" are utilized?

f) Please provide the step-by-step process and timeline followed to restore power supply during the 4.5 hour outage resulting from the severe wind storm in 2017.

g) Please provide the step-by-step process and timeline followed to restore power supply during the wind storm of 2020.

h) Please identify the severity of any damages to 55L due to the recent post-tropical storm Hurricane Earl and what, if any, outages were experienced.

A. a) It is confirmed.

b) Yes, any outages that are not classified as significant events are included in Newfoundland Power's system SAIDI/SAIFI statistics for performance under normal operating conditions.

c) The storm experienced in 2017 was classified as a significant event and therefore was removed from the SAIDI/SAIFI statistics for performance under normal operating conditions. The storm experienced in 2020 was included in the SAIDI/SAIFI statistics for performance under normal operating conditions.

d) Yes, it is expected that the rebuilt line would maintain continuity of supply during such wind storms.[1] The rebuilt line would be constructed to the weather criteria outlined in the response to Request for Information CA-NP-060.

e) Hotline methods are used to complete work on an energized line. The repairs associated with the referenced outage events were not completed using hotline methods since the line was de-energized.

[1] The maximum wind speed measured at the closest Environment Canada Weather station at Cape Race during the 2017 wind storm was 114 km/h. The maximum wind speed measured at Cape Race during the 2020 wind storm was 120 km/h.

Hotline work methods for 66 kV infrastructure require the use of specialized tools and equipment such as hot sticks, lifting tongs, holding tongs, and cover up. Powerline Technicians complete specialized training in order to complete hotline work on 66 kV infrastructure. Newfoundland Power currently has 14 Powerline Technicians that are trained in 66 kV hotline work methods.

Figure 1 shows some of the tools and equipment used in completing hotline work.

Figure 1 - Hotline Tools and Equipment

Figure 2 shows a typical hotline work setup on a single pole structure.

Figure 2 - Typical Hotline Setup on Single Pole Structure

f) Newfoundland Power does not maintain exact step by step records of the response to historical outage events. However, the following sequence of events is typical in response to a transmission line outage:

i) The System Control Center would be alerted of the outage through the Company's Supervisory Control and Data Acquisition ("SCADA") system.

ii) The System Control Center would notify the regional operations manager, or on-call supervisor if the outage occurred during non-business hours.

iii) The regional operations manager or on-call supervisor would initiate the outage response which would include obtaining any available fault location information from protective relays or fault locating devices, dispatching Powerline Technicians and other required field staff, patrolling the line to identify the root cause of the outage, and dispatching any required contractor resources required to complete equipment repairs.

iv) Once the outage location and cause are determined, a work plan is created to complete the repairs and restore the transmission line to service.

g) See part f).

h) Transmission Line 55L did not sustain damage due to post-tropical storm Earl and no outages were experienced on this line. This storm resulted in record rainfalls with a moderate wind speed.[2]

[2] Post-tropical storm Earl resulted in 172.4 mm of rain with wind gusts of up to 115 km/h.