

System Event on T-2 (Avondale Road)

Description of Event:

On December 3, 2015, transmission line T-2 from the Charlottetown Plant to the Lorne Valley switching station tripped at 5:18 a.m. This caused all substations and wind farms east of Charlottetown to be interrupted as this load was being fed from transmission line T-2. Historically, T-4 transmission line from the Charlottetown Plant to Lorne Valley can be used to pick up the load east if T-2 transmission line becomes unavailable; however, a section of T-4 was out of service due to Y-104 being constructed in the same right-of way as T-4 with T-4 being de-energized for safety reasons.

The fault was as a result of a motor vehicle accident on the Avondale Road. The driver of the vehicle left the scene and has a summary conviction of failing to report an accident and driving without due care and attention. The vehicle hit and broke a vertical offset pole (a complex guyed structure under considerable tension). A crew was dispatched to patrol the transmission line. Once the crew found the problem and assessed the needed repairs, additional crews were called in to perform line switching and assist in the repairs. A number of transmission line switches were then reconfigured to isolate the accident location and restore as much service as possible. The Crossroads Substation was returned to service at 6:57 a.m. However, because T-4 transmission line from Charlottetown Plant to Lorne Valley was unavailable due to the construction of Y-104, the East Point and Hermanville wind farms, Church Road, Victoria Cross, Dover, Georgetown, Dingwells Mills, Scotchfort and Souris substations remained off until the repairs were completed.

Repairs:

Upon the damage assessment being carried out and the transmission line switches reconfigured, at approximately 8:30 a.m. three crews commenced the repairs. The repairs were labour intensive due to the structure type and guy wire tensioning required. The repair crews estimated that the repairs would take three to four hours. The repairs were completed at 11:45 a.m. and load was picked up for the Church Road, Victoria Cross, Dover, Georgetown, Dingwells Mills, Scotchfort and Souris substations by approximately 12:15 p.m.

Since the incident, transmission line T-4 has been restored to its original configuration and is able to back up the T-2 transmission line.

Conclusion:

The internal review of the incident concluded that the response and repair times were reasonable considering the time required for the patrolling and switching required and the type of structure being replaced. The transmission line protection equipment operated correctly for the system event.