

Q. Reference: Response to PUB-NLH-118

- a) Provide additional SAIDI and SAIFI charts for each of the requested geographic location that include the (i) the specific location data, (ii) Hydro’s system comparator, (iii) the CEA comparator and (iv) Newfoundland Power’s comparator.
- b) For each geographic location discuss Hydro’s performance compared with each of the other three comparators and how the nine technology solutions identified in the response to PUB-NLH-117 (a) are being used to improve customer outage response.

A. a) Chart 1 through Chart 10 show the SAIFI¹ and SAIDI² charts updated to include the Newfoundland and Labrador Hydro (“Hydro”) 2021–2026 average and an Electricity Canada (“EC”) Region 2 comparator.³

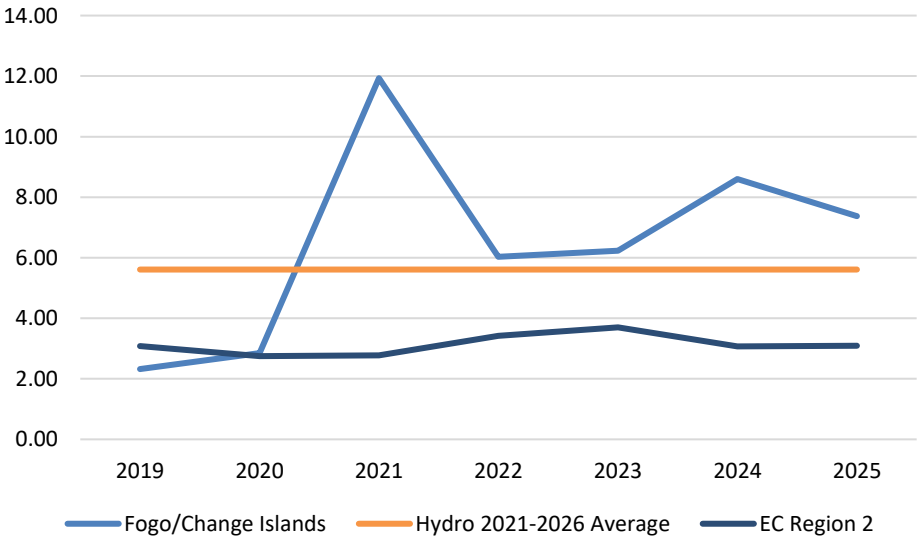


Chart 1: SAIFI – Fogo/Change Islands

¹ System Average Interruption Frequency Index (“SAIFI”).
² System Average Interruption Duration Index (“SAIDI”).
³ Hydro does not have the requested Newfoundland Power Inc. data; however, they typically outperform EC Region 2 averages.

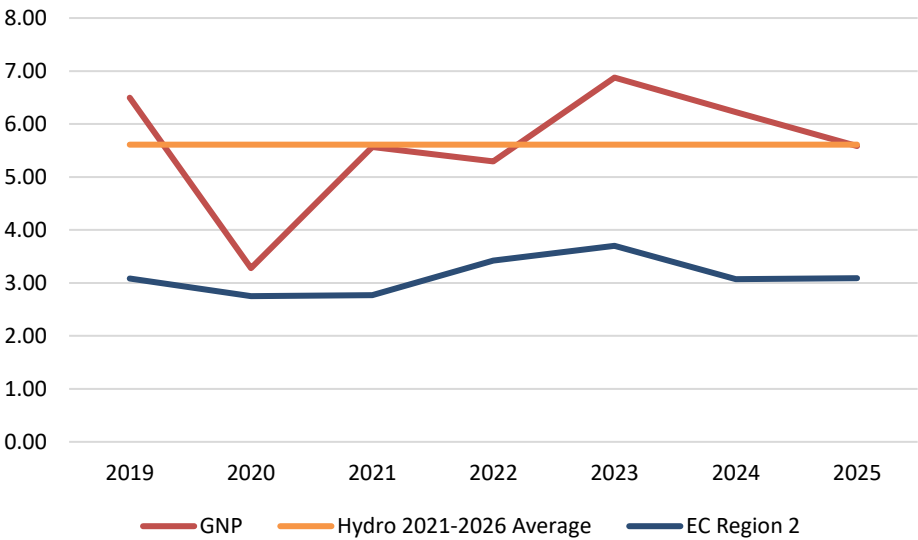


Chart 2: SAIFI – Great Northern Peninsula (“GNP”)

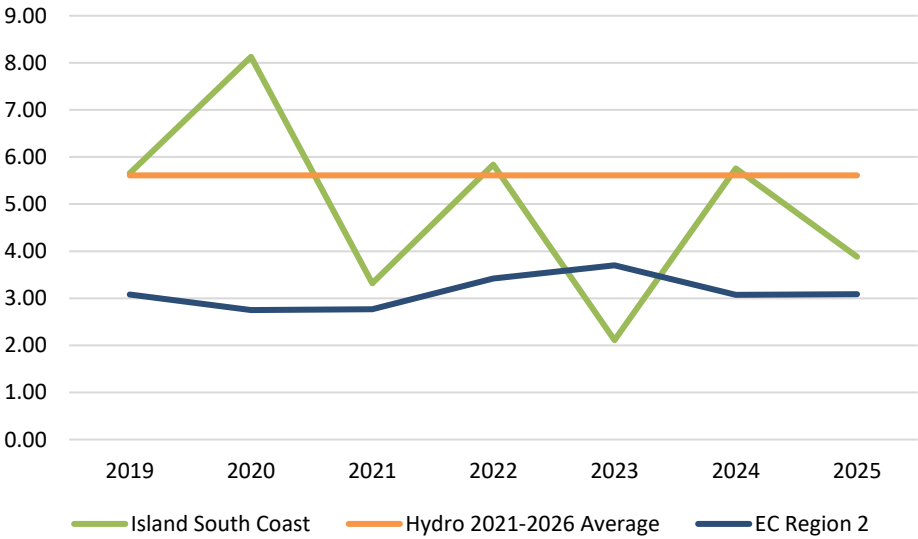


Chart 3: SAIFI – Island South Coast

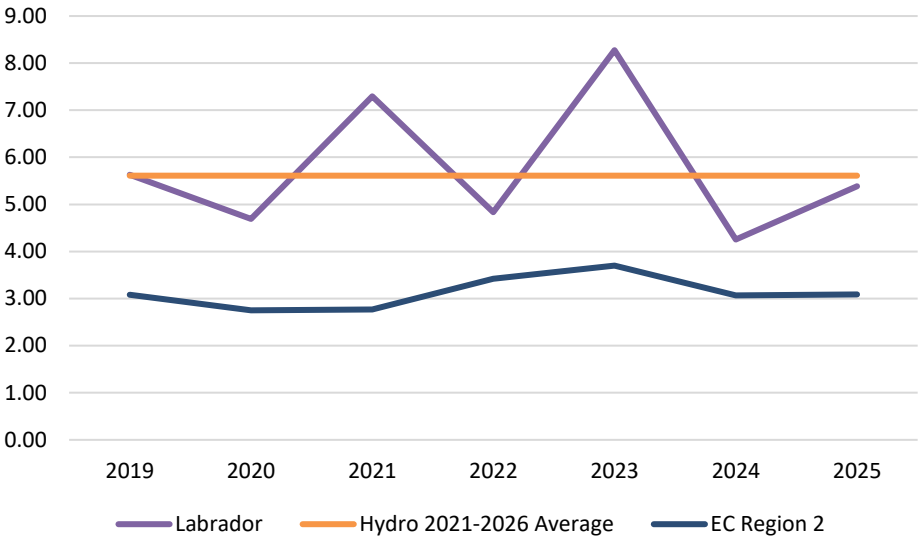


Chart 4: SAIIFI – Labrador

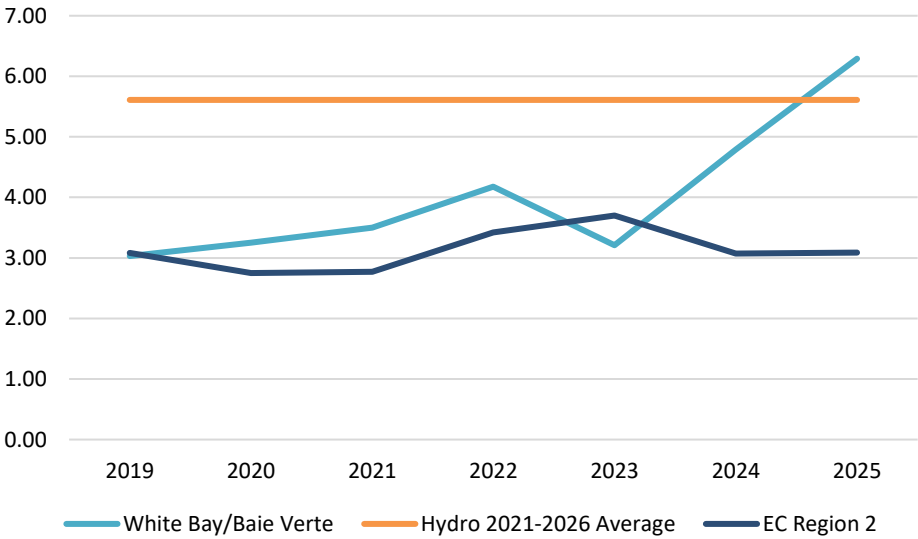


Chart 5: SAIIFI – White Bay/Baie Verte

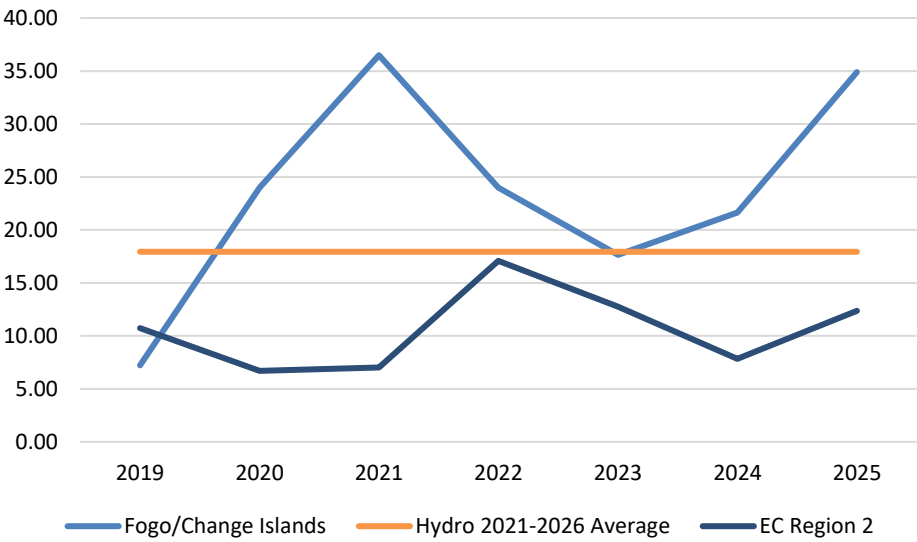


Chart 6: SAIDI – Fogo/Change Islands

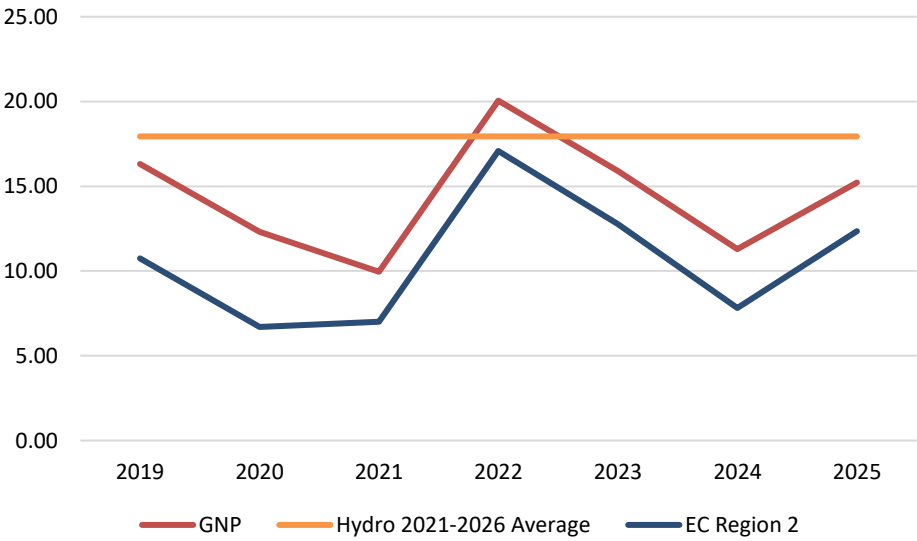


Chart 7: SAIDI – GNP

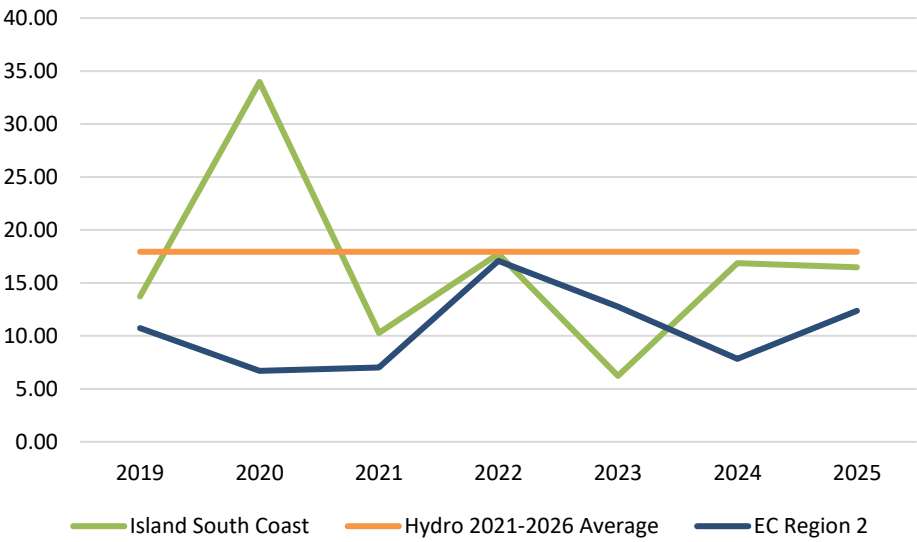


Chart 8: SAIDI – Island South Coast

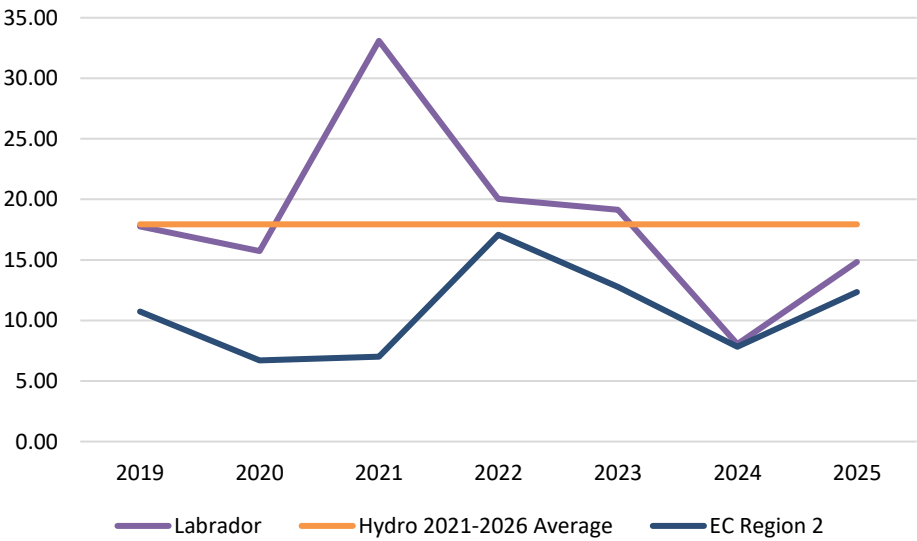


Chart 9: SAIDI – Labrador

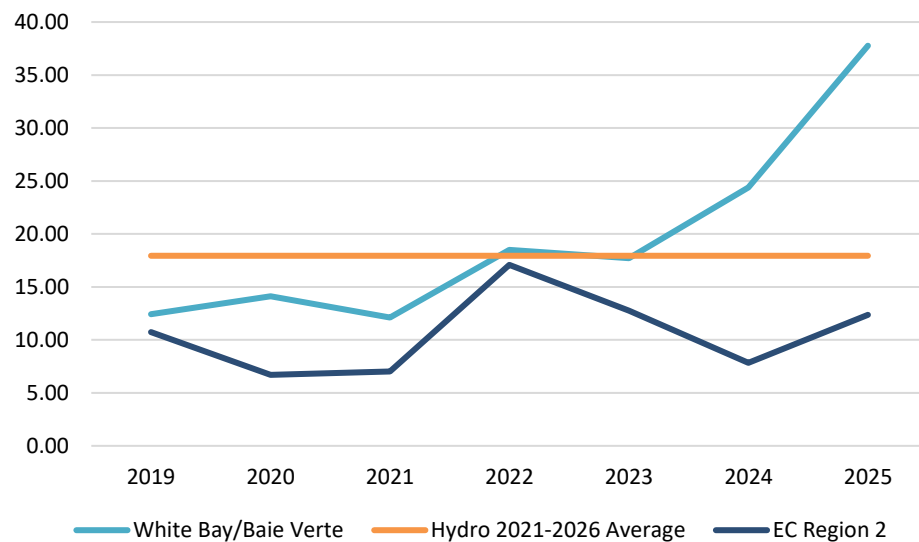


Chart 10: SAIDI – White Bay/Baie Verte

- b) Based on the data outlined in Chart 1 through Chart 10, on average, Fogo/Change Islands SAIFI and SAIDI are higher than Hydro’s five-year average and EC Region 2. The GNP SAIFI is aligned with Hydro’s five-year average and higher than EC Region 2, and SAIDI is lower than Hydro’s five-year average and higher than EC Region 2. The Island South Coast SAIFI and SAIDI are lower than Hydro’s five-year average and higher than EC Region 2. White Bay/Baie Verte SAIFI is lower than Hydro’s five-year average and higher than EC Region 2, and SAIDI is higher than Hydro’s five-year average and EC Region 2.

The technology solutions identified in Hydro’s response to part a) of PUB-NLH-117 of this proceeding are being used to improve customer outage response as follows:

- Secure remote access allows technologists to remote into Operational Technology (“OT”) systems and complete repairs without travelling to site, provides 24/7 access during storms and other disruptions, and enables remote support to diesel plant operators when problems arise. This technology is available across all Hydro service areas where connected systems are available.
- The Supervisory Control and Data Acquisition (“SCADA”) network upgrade strengthened Hydro’s secure remote access capability by upgrading hardware and moving to higher-bandwidth circuits, which allowed the secure remote access

1 solution to be expanded to remote sites. This has the potential to reduce outage
2 duration by enabling remote operation of downstream devices, such as reclosers,
3 while also reducing the need for crew dispatch. With the support of the SCADA
4 network upgrades, Hydro installed recloser remote control at the Upper Salmon
5 Generating Station, Hampden Terminal Station, and Jackson's Arm Terminal
6 Station.⁴

- 7 • Standardized diesel plant network topology addresses historically inconsistent
8 plant-to-plant configurations and moved those environments to the OT network,
9 creating a more predictable environment and more efficient troubleshooting
10 experience. This is important because restoration delays often arise not only from
11 the repair itself, but from the time needed to understand site-specific
12 configurations and determine how to support operators or field staff. Hydro has
13 implemented this genset dispatch technology at several diesel plants, including
14 Nain, Hopedale, Makkovik, Cartwright, and Ramea.
- 15 • Sequence of events tracker automatically alerts the departments responsible for
16 key assets when timestamping issues occur in the field, sends notices directly to
17 those groups, and supports corrections needed for trending, root cause analysis,
18 and problem resolution. This technology is available across all Hydro service areas
19 where connected systems are available.
- 20 • Database data replicator is an automated correction of data to address out-of-sync
21 issues and increased data integrity, allowing quicker incident response. This
22 technology is available across all Hydro service areas where connected systems are
23 available.
- 24 • Hydro's OT ticketing system improves intake, visibility, and prioritization of work
25 requests, creating a streamlined process for addressing system issues. This
26 technology is available across all Hydro service areas where connected systems are
27 available.

⁴ As part of Hydro's 2027 Capital Budget Application, Hydro is proposing the implementation of a Distribution Equipment SCADA Additions project to enable remote control and monitoring of electrical distribution equipment within substations. Hydro continues to be focused on the implementation of technology that will improve operational efficiency and public safety.

- 1 • Thunderstorm management cloud service provides better accessibility during
2 storm-related events to support quicker response coordination. This technology is
3 available across all Hydro service areas where connected systems are available.
- 4 • Station annunciation improves the granularity of information available to the
5 Energy Control Centre during system events to respond more appropriately. Hydro
6 upgraded station annunciation at Massey Drive Terminal Station in 2022.
- 7 • System protection upgrades to address electromechanical and older solid-state
8 types that lack features such as data storage and event recording capability and
9 replace with modern digital multifunction relays, as they have increased setting
10 flexibility, fault disturbance monitoring, communications capability, and metering
11 functionality and offer greater dependability and security, enhancing system
12 reliability. Hydro has completed protection upgrades at various locations,
13 including, but not limited to, Transmission Lines TL247, TL248, and Berry Hill TL227.