Q. **Reference: Volume I, Section 2.2.3, lines 5-8**

a) Identify any technology solutions that have been implemented to improve service restoration response from 2020 to 2026 and describe the benefits that have been achieved.

b) Identify any technology solutions that are planned to be implemented to improve service restoration response and describe the benefits that are anticipated to be achieved.

A. **a)** Newfoundland and Labrador Hydro ("Hydro") has implemented a number of technology improvements that support faster response to operational issues and, where applicable, service restoration. These improvements reduce the time required to access operational systems, diagnose issues, support field operators, and obtain asset-condition information.

Hydro's approach to the implementation of new technology is to assess potential investments in the context of its established reliability objectives, customer needs, operational requirements, and the overall cost of providing service. Hydro evaluates individual technologies on their merits and considers the extent to which the expected reliability, operational, safety, and other benefits provide a reasonable balance with the associated costs ultimately borne by customers.

Technologies that can improve reliability or service restoration while also providing operational efficiencies can therefore provide greater overall value to customers. For example, increased integration of distribution equipment with Hydro's Supervisory Control and Data Acquisition ("SCADA") system, including remote monitoring and operation of equipment such as reclosers, can reduce outage duration while also reducing the need for certain site visits, improving the utilization of field resources, and providing additional operational and system information.

Examples of technology solutions that have been implemented to improve service restoration response include:

- **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.
- **SCADA Network Upgrade** – The 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 solution to be expanded to remote sites. This has the potential to reduce outage duration by enabling remote operation of downstream devices, such as reclosers, while also reducing the need for crew dispatch. With the support of the SCADA network upgrades, Hydro installed recloser remote control at the Upper Salmon Generating Station in 2021, Hampden Terminal Station in 2022, and Jackson's Arm Terminal Station in 2023.
- **Standardized Diesel Plant Network Topology** – Addressed historically inconsistent plant-to-plant configurations and moved those environments to the OT network, creating a more predictable environment and more efficient troubleshooting experience. This is important because restoration delays often arise not only from the repair itself, but from the time needed to understand site-specific configurations and determine how to support operators or field staff. Hydro standardized on this genset dispatch technology in 2021. Since then, it has been implemented at several diesel plants, including Natuashish, Nain, Hopedale, Makkovik, Cartwright, and Ramea.
- **Sequence of Events Tracker** – Automatically alerts the departments responsible for key assets when timestamping issues occur in the field, sends notices directly to those groups, and supports corrections needed for trending, root cause analysis, and problem resolution.

- **Database Data Replicator** - Automated correction of data out-of-sync issues and increased data integrity, allowing quicker incident response.
- **OT Ticketing System** – Improves intake, visibility, and prioritization of work requests.
- **Thunderstorm Management Cloud Service –** Better accessibility during storm-related events can support quicker response coordination.
- **Station Annunciation –** Improves the granularity of information available to the Energy Control Centre ("ECC") during system events to respond more appropriately. Hydro upgraded station annunciation at the Holyrood Terminal Station and Massey Drive Terminal Station in 2021, as well as the Sunnyside Terminal Station and Oxen Pond Terminal Station in 2022.
- **System Protection Upgrades -** Electromechanical and older solid-state types lack features such as data storage and event recording capability are replaced with modern digital multifunction relays, as they have increased setting flexibility, fault disturbance monitoring, communications capability, and metering functionality and offer greater dependability and security, enhancing system reliability. Hydro has completed protection upgrades at various locations, including, but not limited to, Transmission Lines TL247 and TL248 in 2022, Hardwoods T3 Transformer in 2023, and Berry Hill TL227 in 2026.

b) In accordance with Board of Commissioners of Public Utilities Order No. P.U. 30(2007), Hydro's annual capital budget application ("CBA") includes a five-year capital expenditure plan. As part of Hydro's 2027 CBA,[1] Hydro is proposing the implementation of a Distribution Equipment SCADA Additions project to enable remote control and monitoring of electrical distribution equipment within substations. Connection of distribution equipment to the SCADA network will improve public safety and operational efficiency. This project will allow for two-way communication between Hydro's ECC and substation distribution equipment, including improved power system management through identification of issues and outages

[1] "2027 Capital Budget Application," Newfoundland and Labrador Hydro, July 14, 2026, vol. II, sch. 7, prog. 25.

in a timely manner. The ability to remotely control distribution equipment will improve outage response time and public safety. For additional information on potential future technology initiatives, please refer to the 2027-2031 Capital Plan, filed as part of Hydro's 2027 CBA.[2]

[2] 2027 Capital Budget Application," Newfoundland and Labrador Hydro, July 14, 2026, vol. I, sch. 2.