

Generation

Q. Reference: "2024 Capital Budget Application," Newfoundland Power Inc., June 22, 2023, Supporting Materials, Generation: 4.2, sec. 1.0, p. 1 and sec. 4.0, p. 11.

The surge tank is approaching the half way point of its expected service life and addressing the deterioration related to rust and corrosion now will ensure it provides reliable service for the remainder of its service life. [p.1]

A properly protected steel surge tank can have a service life exceeding 80 years. [p.11]

- a) Please confirm the Mobile Plant surge tank is 23 years old.**
- b) Please provide the basis of Newfoundland Power's anticipated life expectancy for the tank.**
- c) Is refurbishment of this nature expected to be required again in the remaining lifetime of the tank?**

- A. a) It is confirmed that the current Mobile surge tank was installed in 1999 and has been in service for 23 years.¹
- b) The anticipated service life of greater than 80 years was derived from a statement about penstocks from *ASCE Manuals and Reports on Engineering Practice No. 79 – Steel Penstocks* published by the American Society of Civil Engineers. It is Newfoundland Power's observation that surge tanks and penstocks share many of the same characteristics and are subject to similar operating and environmental conditions.

Operating experience within the region also indicates an expected life of at least 80 years. Newfoundland and Labrador Hydro ("Hydro") in its *2024 Capital Budget Application* has proposed a life extension to take its Bay D'Espoir ("BDE") surge tank No. 1 to a 78-year service life.² The Company's Rattling Brook surge tank has been in service since 1959, with a 64-year service life as of 2023. Several deficiencies including coating failure were addressed in 2021 and the surge tank is expected to remain in service for the full 80 year expected life.

¹ In 1999 the current surge tank at Mobile Plant replaced the original surge tank installed in 1951 after 48 years in service.

² BDE surge tank 1 was installed in 1967. The project proposed will provide a life extension of 20 years once completed in 2025, or to 2045. 1967 to 2045 is 78 years. See Hydro's *2024 Capital Budget Application, Project 4* report, page 8.

Requests for Information

- 1 c) Yes, protective coating system replacement is anticipated to be completed
- 2 approximately every 25 years for the remaining life of the surge tank. This future
- 3 capital expenditure is included in the economic analysis for this project.