

Q. Reference: Newfoundland Power's 2027 Capital Budget Application, 2.2 Substation Power Transformer Strategy, page 8

Provide a summary of the existing assets and their utilization, including installed capacity and availability at the Lookout Brook Hydro Plant.

A. Newfoundland Power's Lookout Brook Hydro Plant (the "Plant") is located near the community of St. George's in western Newfoundland and was first commissioned in 1946. The Plant has received numerous upgrades during its approximately 80-year service life, including new generating units in 1958 and 1984, and a significant plant refurbishment in 2024 and 2025. The Plant assets include the hydraulic structures, plant and generating equipment, and Lookout Brook Substation.

The Plant draws water from a watershed consisting of the Lookout Brook Forebay Reservoir, Joe Dennis Pond Reservoir, and Cross Pond Reservoir. These reservoirs are impounded by seven water control structures which control waterflow into the Plant intake structure. From the plant intake, water flows into a combination buried and above ground penstock which bifurcates prior to entering the plant building and feeding the generating units. Once discharged from the generating units, water flows into the Plant tailrace and through Lookout Brook before reaching Flat Bay Brook.

The Plant currently operates with two horizontal Francis turbine units, G3 and G4. Generator G3 was manufactured by Gilbert, Gilkes and Gordon and installed in 1958, with a rated capacity of 2.7 MW. Generator G4 was manufactured by Barber Hydraulic Turbine and installed in 1984 with a rated capacity of 2.9 MW. In addition to the generators, the Plant includes protection and controls systems, generator breakers, equipment monitoring systems, telecommunications systems, and other essential equipment.¹

Lookout Brook Substation steps the 2.4 kV output of G3 and G4 up to the 66kV of transmission line 403L. The substation also provides primary and emergency station service of 120/208 V for the Plant and a local feeder to supply site facilities and a distribution line extending to the forebay structures. The substation equipment includes transformer LBK-T1 as well as various disconnects, breakers and miscellaneous equipment.

Newfoundland Power maintains availability statistics by generating unit. From 2020 to 2025, generating unit G3 availability was 81.78% and G4 availability was 92.17%.²

¹ A detailed condition assessment of the Lookout Brook Hydro Plant was most recently provided in Newfoundland Power's *2024 Capital Budget Application* report 4.1 *Lookout Brook Hydro Plant Refurbishment*.

² Generator G3 was unavailable for a portion of 2025 to complete a stator rewind and mechanical refurbishment under the *Lookout Brook Hydro Plant Refurbishment* project, approved in Order No. P.U. 2 (2024).