

1 **Reference: Hydro Plants Refurbishment and Rehabilitation**

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3 **Q. Please provide a table that shows the total capital expenditures in the last ten**
4 **years spent on hydro generation assets, expenditures included in the 2024-**
5 **2028 Capital Plan for hydro plant refurbishment and rehabilitation, the**
6 **number of hydro plants and the number refurbished and rehabilitated over**
7 **the last ten years.**

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9 A. Newfoundland Power operates 23 generating plants with 32 total generating units and
10 numerous other electrical and civil assets.

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12 Refurbishment and rehabilitation of hydro generation assets are undertaken annually in
13 specific plant refurbishment or facility rehabilitation projects. Specific plant
14 refurbishment projects involve assets like penstocks, switchgear, protection and control
15 systems, generator windings, turbines, and governors. The *Lookout Brook Hydro Plant*
16 *Refurbishment* project proposed in the *2024 Capital Budget Application* is an example of
17 a specific plant refurbishment project. Facilities rehabilitation projects can include
18 cranes, dams, control structures, gatehouses, spillways, bridges, and road rehabilitation.
19 The *Lockston Powerhouse Crane* replacement is an example of a work scope under the
20 *2024 Hydro Facilities Rehabilitation* project.

21
22 Table 1 shows the total capital expenditures by year for the last 10 years for hydro
23 generation assets broken down by plant refurbishment and facility rehabilitation
24 projects. The table also identifies the number of plants each year that were included in
25 these projects.¹

¹ Excluded from this data are the expenditures and number of plants included in the *Hydro Plant Replacements Due to In-Service Failures* program. Prior to the *2023 Capital Budget Application* these projects and expenditures were included as *Equipment Replacements Due to In-Service Failures* inside of the Hydro Facility Rehabilitation. The expenditures inside of this project typically involve a large number of small expenditures.

Table 1 Capital Expenditures –Hydro Generation				
Year	Plant Refurbishment		Facility Rehabilitation ²	
	Expenditure (\$000s)	Number of Plants	Expenditure (\$000s)	Number of Assets
2013	1,836	3	798	4
2014	6,020	1	953	4
2015	3,132	4	1,247	4
2016	14,154	1	494	4
2017	2,993	3	1,295	3
2018	1,091	2	1,959	6
2019	1,026	1	1,255	5
2020	756	3	377	3
2021	11,707	3	755	4
2022	693	3	1,117	5
2023F	7,937	2	1,142	5
2024F	3,819	2	794	3
2025F	6,332	5	940	0 ³
2026F	3,561	2	959	0
2027F	10,093	2	978	0
2028F	6,611	3	998	0

1 In the last 10 years, 10 separate, distinct hydro plants underwent refurbishment of
 2 various kinds.⁴ Also, in the last 10 years, 20 of the 23 hydro plants had some form of
 3 facility rehabilitation completed. The five-year plan has identified plant refurbishments
 4 at an additional seven unique hydro plants.

² The number of assets included in this total represents the total individual scopes of work completed in a given year. Some scopes of work may have been undertaken at one hydro plant development.

³ The *Hydro Facility Rehabilitation* projects for 2025 through to 2028 do not have specific hydro plants identified. These projects will be prioritized and identified as part of the annual capital budget planning process.

⁴ The data provided in Table 1 shows the number of plants undergoing refurbishment year-over-year. In some cases, the same plant underwent refurbishment more than once for different scopes of work. For example, the refurbishment of units G1 and G2 at the Rattling Brook Hydro Plant occurred in 2019 and 2020, respectively. This plant is reflected in both the 2019 and 2020 expenditures and number of plants in each of those years, but remains a single distinct hydro plant.