

1 **Q. Reference: 2027 Capital Budget Application, Program 6, Renew Diesel Units, page 8.**

2 Hydro states that it will continue to evaluate, on a case-by-case basis, whether replacement is
3 the least-cost option compared to overhaul. Consistent with this approach, Hydro has included a
4 project in its 2027 Capital Budget Application to replace a generating unit in Makkovik.

5 Please explain how Hydro decides which gensets will be treated as a named capital project
6 versus being addressed under the Renew Diesel Units program.

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9 **A.** When a genset reaches the end of its useful service life¹ it is typically at least 25 years old. It is
10 rare that the product line is still in production and therefore it often cannot be renewed as new
11 OEM² engines and/or gensets are not available. In this event, it will be proposed as a capital
12 project, such as the Makkovik Unit 2029 replacement. It is also rare that when a genset reaches
13 the end of its useful service life, it is still a suitable capacity rating to serve the required load.
14 This requires a unit sizing study to determine which size unit would result in the lowest cost
15 operation over the study period. In most cases, it is required to install a larger or smaller genset
16 than the outgoing genset. Installing a different genset also requires changes and upgrades in the
17 cooling system, exhaust system, power cables, switchgear and controls, etc.

18 In the infrequent occurrence where a genset reaches the end of its useful service life, the unit is
19 still manufactured and is still a suitable capacity to efficiently serve the load, it would be
20 addressed under the renew diesel gensets program. This allows Newfoundland and Labrador
21 Hydro to purchase the exact same unit and install it without having to upgrade any auxiliary
22 systems, resulting in significant cost savings.

¹ The useful service life of a 1,800 rpm unit is 100,000 hours, and 120,000 hours for a 1,200 rpm unit.

² Original Equipment Manufacturer ("OEM").