

1 Q. **Reference: Tab 15; Volume II: Overhaul Diesel Units – Various (2021)**

2 Table A-1 on page A-1 outlines Hydro’s Diesel Engine Overhaul five-year plan. On August 27,
3 2020 the Board approved Hydro’s capital expenditure for the acquisition and installation of
4 equipment to connect and integrate a photovoltaic (188 kW) and battery operated storage
5 system (334.5 kW/669 kWh) at Mary’s Harbour.

6 Does the scheduled photovoltaic and battery operated storage system in Mary’s Harbour affect
7 the timing (or need altogether) for the Mary’s Harbour Unit 2090 and Unit 2093 diesel engine
8 overhauls currently scheduled for 2021 and 2022 respectively? If so, please provide the new
9 scheduled overhaul dates. If not, please explain.

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12 A. Newfoundland and Labrador Hydro (“Hydro”) does not expect the scheduled photovoltaic
13 (“PV”) and battery energy storage system (“BESS”) in Mary’s Harbour to affect the timing or
14 need for the Mary’s Harbour Unit 2090 or 2093 diesel engine overhauls.

15 The PV and BESS system in Mary’s Harbour, along with the mini-hydro plant, are designed to
16 operate in conjunction with the existing diesel plant and are not designed to operate without
17 diesel generation online. As such, these renewable energy sources will only impact the diesel
18 engine overhaul schedule in situations where the renewable energy generation is substantial
19 enough for Hydro to either operate fewer diesel generators at a given time or operate a smaller
20 unit than would otherwise be required. In cases where unit operating hours are reduced,
21 overhauls would be deferred.

22 The PV and BESS systems are scheduled to be commissioned in August 2021 and Mary’s Harbour
23 Unit 2090 is scheduled to be overhauled by November 2021. With only a few months of
24 overlap, the PV and BESS will not have an appreciable impact on the operating hours incurred
25 on Unit 2090.

1 Unit 2093 is currently the smallest diesel generation unit in the Mary's Harbour system and may
2 begin to incur increased operating hours following the connection of the PV and BES systems to
3 permit increased fuel displacement. Hydro will monitor the performance and output of the PV
4 and BESS system and its impact on the operating hours and replacement schedule of Unit 2093.