

1 Q. **Reference: Volume II - Tab 16 - Additions for Load - Distribution System - Mary's Harbour**
2 **Voltage Conversion**

3 Are there any changes to the values in Table 3 on page 8 if Phase 2 of Hydro's proposed long-
4 term supply plan for southern Labrador does not occur? If so, please provide a table similar to
5 Table 3 highlighting the changes. Again, please provide the detailed analysis and assumptions
6 used to compile the CPW values.

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9 A. If Newfoundland and Labrador Hydro ("Hydro") were to assume that the proposed plan for
10 southern Labrador does not occur, voltage conversion would no longer be required in the year
11 2030 for the following alternatives:

- 12 ● Reconductor with 477 ASC;
- 13 ● Reconductor with 4/0 AASC; and
- 14 ● Install Voltage Regulators.

15 If the voltage conversion costs are removed from the analysis, the results in Table 3 of the
16 referenced project report would be as shown below in Table 1.¹

Table 1: Mary's Harbour Voltage Conversion – Alternative Comparison – CPW² to the Year 2021

Alternatives	CPW	CPW Difference between Alternative and Least-Cost Alternative
Reconductor with 477 ASC	547,764	0
Reconductor with #4/0 AASC	621,167	73,403
New Regulator - 300 A	804,689	256,925
Voltage Conversion	1,148,253	600,489

¹ This analysis compares each alternative over 20 years and uses Hydro's corporate discount rate, each alternative's capital costs, fuel costs, and distribution losses.

² Cumulative net present value ("CPW").

1 As it is Hydro's plan to interconnect Mary's Harbour to the proposed regional diesel generating
2 station in Port Hope Simpson, voltage conversion would be required in 2030 if any of these
3 alternative were implemented instead of performing the voltage conversion in 2022 and 2023 as
4 proposed. Therefore, voltage conversion in 2030 was reflected in Hydro's cost-benefit analysis
5 evaluating each of the non-voltage conversion alternatives.³

6 Please refer to PUB-NLH-019, Attachment 1 for the detailed analysis spreadsheet of the CPW for
7 this project.

³ If the proposed southern Labrador interconnection project is not approved, Hydro will revisit the Mary's Harbour Voltage Conversion proposal.