

1 Q. **Reference: Response to Request for Information NP-NLH-041, Page 2 of 3,**
 2 **Table 1**

3 Table 1 provides a capital cost estimate of \$10.2 million for the direct rebuild of the
 4 Charlottetown Diesel Generating Station with similar specifications to the pre-fire facility.
 5 Please reconcile the differences between capital cost estimate of \$10.2 million for the direct
 6 rebuild and the \$18.4 million estimate provided in the response to NP-NLH-020 and the \$21.4
 7 million estimates provided in the response to PUB-NLH-001. In the response include specific
 8 details on the differences in work scope included in each estimate.

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11 A. Detailed breakdowns of each estimate are provided in Tables 1, 2, and 3. A detailed breakdown
 12 of the scope included in each estimate is provided below.

Table 1: Estimate Referenced in Response to NP-NLH-041 (\$000)¹

Project Cost	2021	2022	2023	2024	Total
Material Supply	0.0	496.3	418.0	942.0	1,856.3
Labour	177.2	819.6	425.2	748.4	2,170.4
Consultant	25.4	173.1	182.0	137.0	517.5
Contract Work	0.0	936.0	1,170.0	810.0	2,916.0
Other Direct Costs	15.5	282.3	112.8	289.5	700.2
Interest and Escalation	11.6	218.4	400.1	628.7	1,258.8
Contingency	21.8	270.7	230.8	292.7	816.0
Total	251.5	3,196.5	2,938.9	3,848.3	10,235.2

¹ Numbers may not add due to rounding.

Table 2: Estimate Referenced in Response to NP-NLH-020 (\$000)²

Project Cost	2021	2022	2023	2024	Total
Material Supply	0.0	825.2	2,118.0	3,200.0	6,143.2
Labour	177.2	842.9	444.6	862.2	2,326.8
Consultant	25.4	173.1	197.0	149.0	544.5
Contract Work	0.0	1,136.0	1,650.0	2,135.0	4,921.0
Other Direct Costs	17.5	289.0	112.8	323.1	742.4
Interest and Escalation	11.1	259.6	687.9	1,252.6	2,211.1
Contingency	22.0	326.6	452.2	666.9	1,467.8
Total	253.1	3,852.5	5,662.5	8,588.8	18,357.0

Table 3: Estimate Referenced in Response to PUB-NLH-001 (\$000)³

Project Cost	2021	2022	2023	2024	Total
Material Supply	0.0	85.5	2,118.0	3,939.7	6,143.2
Labour	139.9	333.2	498.9	1,354.9	2,326.8
Consultant	50.5	131.5	231.3	164.2	577.5
Contract Work	20.0	1,955.0	2,638.8	2,832.2	7,446.0
Other Direct Costs	12.8	30.8	137.6	561.2	742.4
Interest and Escalation	11.6	203.8	743.7	1,501.7	2,460.6
Contingency	22.3	253.6	562.5	885.2	1,723.6
Total	257.1	2,993.3	6,930.8	11,239.1	21,420.3

- 1 The differences between capital cost estimates of \$10.2 million (Table 1) for the direct rebuild
 2 and the \$18.4 million (Table 2) for the existing location replacement include:
- 3 • Building Size: The direct rebuild is a smaller configuration capable of only housing three
 4 gensets. As outlined in Hydro’s response to NP-NLH-041 of this proceeding, the building
 5 size that existed prior to the 2019 fire is not a viable alternative for the long-term supply
 6 for Charlottetown. The increase in building footprint required has a cost difference of
 7 \$450,000;
 - 8 • Fire Suppression: The estimate for direct replacement did not include a fire suppression
 9 system. The cost to add this system to the new location is approximately \$1.5 million;

² Numbers may not add due to rounding.
³ Numbers may not add due to rounding.

- 1 ● Supply and Installation of Gensets: The direct rebuild includes three 1,800 rpm units,
2 while the existing location estimate includes four 1,200 rpm units. The four gensets for
3 the new building will allow for full capacity without the use of mobile generation with
4 more reliable 1,200 rpm units. The differences in unit type and quantity account for a
5 cost difference of \$2.5 million;

- 6 ● Protection and Control Equipment: The direct replacement includes costs for a 600 V
7 arrangement while the existing location replacement includes costs for a 5 kV
8 arrangement. This upgrade is required for safer operation of higher output gensets by
9 increasing the generator output voltage and then proportionally reducing the output
10 current. The cost difference between these two arrangements is \$1.7 million;

- 11 ● Electrical Equipment: The direct replacement includes costs for starters for electrical
12 motors while the existing location replacement includes costs for modern motor control
13 center (“MCC”) devices. An MCC arrangement is preferable because consolidating the
14 motor loads into a single MCC removes the need for stand-alone starters and splitters,
15 reducing the electrical footprint. Also, the MCC arrangement allows for more advanced
16 information with systems like devicenet that is not easily available on stand-alone
17 starters. The cost difference between these two arrangements is \$340,000; and

- 18 ● The remaining difference in cost is attributed to the corresponding increase in Interest
19 and Escalation and Contingency which accounts for approximately \$1.6 million in the
20 difference.

21 The differences between capital cost estimates of \$18.4 million for the existing location
22 replacement and the \$21.4 million for the new location replacement include:

- 23 ● Land Purchase: Estimated to be \$20,000;

- 24 ● Site Work: The preparation of a new site includes additional civil works such as clearing
25 land. Estimated to have a difference of \$800,000 in total cost;

- 26 ● Fencing: Construction of new fencing would be required at the new location. Estimated
27 to cost \$100,000;

- 28 ● Fuel Tanks: New fuel tanks are required for the new location. Estimated to cost
29 \$650,000;

- 1 • Septic System: A new septic system is required at the new location. Estimated to cost
2 \$150,000;
- 3 • Distribution Costs: The existing location has negligible distribution costs, while the
4 estimated distribution cost for the new location is \$937,000; and
- 5 • The remaining difference in cost is attributed to the corresponding increase in Interest
6 and Escalation and Contingency which accounts for approximately \$ 500,000 in the
7 difference.