

- 1 Q. **Reference: Network Addition Policy Summary Report, section 2.3.2, page 5 (p. 8 pdf)**
- 2 Citation:
- 3
- 4 The Expansion Cost per kW is an estimate of the cost of potential transmission
- 5 upgrades on the LIS (not reflected in the Transmission Expansion Plan) divided by
- 6 the additional capacity provided by those transmission upgrades.
- 7
- 8 a) Please confirm that Table 1 (Derivation of Expansion Costs per kW) describes the
- 9 derivation of the Expansion Cost of \$465/kW set out in Appendix A to the Policy.
- 10
- 11 b) Please explain what is meant by the parenthetical expression “not reflected in the
- 12 Transmission Expansion Plan ». Are not the projects described in Table 1 found in the
- 13 Labrador Interconnected System Transmission Expansion Study?
- 14
- 15 c) Please explain the basis upon which Hydro decided which projects from the Labrador
- 16 Interconnected System Transmission Expansion Study to include in Table 1.
- 17
- 18 d) With respect to Labrador East, please explain why the MFHVI project, described at
- 19 Alternative 2 in section 5.1.1 and recommended in section 11.2 of the Transmission
- 20 Expansion Study, was not included in Table 1.
- 21
- 22 e) With respect to Labrador West, please explain why the Alternatives 5 and 17, selected
- 23 as the preferred alternatives in Table 11 on page 31 of the Transmission Expansion
- 24 Study and included as recommendations in section 11.2, were not included in Table 1.
- 25
- 26 f) Please recompute the Expansion Cost per kW under the following hypotheses:
- 27
- 28 i) Inclusion of the MFHVI project;
- 29 ii) Inclusion of Alternatives 5 and 17 for Labrador West; and
- 30 iii) Inclusion of the MFHVI project and Alternatives 5 and 17.

- 1           g) Please explain why Hydro chose to develop a single Expansion Cost per kW, rather than  
2           distinct Expansion Costs for Labrador East and Labrador West.  
3  
4
- 5    A.    a) It is confirmed.  
6
- 7           b) Please refer to Newfoundland and Labrador Hydro's ("Hydro") response to LAB-NLH-  
8           090 Part a).  
9
- 10          c) Please refer to Hydro's response to LAB-NLH-090 Part a).  
11
- 12          d) Please refer to Hydro's response to LAB-NLH-90 Parts a) and b).  
13
- 14          e) Please refer to Hydro's response to LAB-NLH-93 Part b) which explains that the  
15          incremental costs and incremental capacity of Alternative 5 compared to Alternative 4  
16          were used in the Expansion Cost per kW provided in Table 1. Please refer to Hydro's  
17          response to LAB-NLH-090 Part a) for an explanation of why Alternative 17 was not included  
18          in the derivation of the Expansion Cost per kW provided in Table 1.  
19
- 20          f) Please see responses below:  
21                i) Table 1 adds the Muskrat Falls to Happy Valley Interconnection project to the  
22                derivation of the Expansion Cost per kW.

Table 1: Derivation of Expansion Costs per kW Alt Scenario 1

Line	Region	Capacity (kW)	Description	2019 Capital Investment (\$000)	Direct Investment (\$ per kW)
1	Labrador East	27,000	Muskrat Falls to Happy Valley Interconnection Project	19,978	740
2		21,000	Transformer Upgrades at Happy Valley-Goose Bay	5,000	238
3		37,000	Transformer Upgrades at Happy Valley-Goose Bay and Muskrat Falls Terminal Station 2	15,000	405
4		100,000	Construction of Second Line from Muskrat Falls to Happy Valley-Goose Bay	50,000	500
5	Labrador West	33,000	Wabush T5 Upgrades and 230 kV Uprating (Alt. 5 Incremental)	16,500	500
6	<b>Subtotal</b>	<b>218,000</b>		<b>106,478</b>	<b>488</b>
7	O&M				12
8	<b>Total</b>				<b>500</b>

- 1                   ii) Table 2 adds Alternatives 5 and 17 for Labrador West in the derivation of the  
2                   Expansion Cost per kW and removes the Alternative 5 incremental cost used in the  
3                   filed Expansion Cost per kW.

Table 2: Derivation of Expansion Costs per kW Alt Scenario 2

Line	Region	Capacity (kW)	Description	2019 Capital Investment (\$000)	Direct Investment (\$ per kW)
1	Labrador East	21,000	Transformer Upgrades at Happy Valley-Goose Bay	5,000	238
2		37,000	Transformer Upgrades at Happy Valley-Goose Bay and Muskrat Falls Terminal Station 2	15,000	405
3		100,000	Construction of Second Line from Muskrat Falls to Happy Valley-Goose Bay	50,000	500
4	Labrador West	67,000	Wabush T5 Upgrades and 230 kV Uprating (Alt. 5 Total)	31,660	473
5		100,000	Alternative 17	153,150	1,532
6	<b>Subtotal</b>	<b>325,000</b>		<b>254,810</b>	<b>784</b>
7	O&M				12
8	<b>Total</b>				<b>796</b>

- 4                   iii) Table 3 adds the Muskrat Falls to Happy Valley Interconnection project for Labrador  
5                   East and Alternatives 5 and 17 for Labrador West in the derivation of the Expansion Cost  
6                   per kW. The calculation also removes the Alternative 5 incremental cost used in the filed  
7                   Expansion Cost per kW.

Table 3: Derivation of Expansion Costs per kW Alt Scenario 3

Line	Region	Capacity (kW)	Description	2019 Capital Investment (\$000)	Direct Investment (\$ per kW)
1	Labrador East	27,000	Muskrat Falls to Happy Valley Interconnection Project	19,978	740
2		21,000	Transformer Upgrades at Happy Valley-Goose Bay	5,000	238
3		37,000	Transformer Upgrades at Happy Valley-Goose Bay and Muskrat Falls Terminal Station 2	15,000	405
4		100,000	Construction of Second Line from Muskrat Falls to Happy Valley-Goose Bay	50,000	500
5	Labrador West	67,000	Wabush T5 Upgrades and 230 kV Uprating (Alt. 5 Total)	31,660	473
6		100,000	Alternative 17	153,150	1,532
7	<b>Subtotal</b>	<b>352,000</b>		<b>274,788</b>	<b>781</b>
8	O&M				12
9	<b>Total</b>				<b>793</b>

1 g) Please refer to LAB-NLH-092.