

- 1 Q. **Reference: Network Addition Policy Summary Report, section 2.3.3, page 6 (p. 9 pdf)**
- 2 Citation:
- 3
- 4 Hydro proposes a more detailed system impact review process to deal with
- 5 customer requests of 1500 kW or larger. These requests will trigger a preliminary
- 6 assessment to determine if compliance with the request will require an
- 7 acceleration of the Transmission Expansion Plan.
- 8 ...
- 9 If acceleration of the Transmission Expansion Plan is necessary, Hydro will
- 10 determine the Expansion Advancement Cost. This amount will reflect the
- 11 difference between the cost of acceleration of the Transmission Expansion Plan
- 12 and the value of the acceleration of the Transmission Expansion Plan to existing
- 13 customers.
- 14
- 15 a) Please explain how Hydro will determine whether or not acceleration of the
- 16 Transmission Expansion Plan would be required, given that said Plan does not contain
- 17 any timetables or other indication of when certain investments would be required.
- 18
- 19 b) Please indicate in detail how the cost of acceleration of the Transmission Expansion
- 20 Plan will be determined.
- 21
- 22 c) Please provide numerical examples, with detailed calculations presented in Excel
- 23 format with formulas intact, to demonstrate how the cost of acceleration of the
- 24 Transmission Expansion Plan will be determined, including :
- 25
- 26 i) The addition of a 10 MW data centre load in Labrador East, starting in 2021;
- 27 ii) The addition of a 30 MW data centre load in Labrador West, starting in 2021.
- 28
- 29 d) Please provide an additional detailed numerical example in Excel format for the
- 30 following hypothetical example : in 2016, for the addition of the two data centres that
- 31 now have service contracts in Labrador East, assuming that the proposed Network
- 32 Addition Policy had been in effect.

- 1 A. a) The Transmission Expansion Plan developed in the “Labrador Interconnected System  
2 Transmission Expansion Study” includes the set of all system upgrades that are required to  
3 meet Baseline Load Forecast for the 25-year study period. If a customer request of 1,500  
4 kW or larger is received, an analysis will be performed to determine if any incremental  
5 transmission system upgrades would be required during the study period. If such upgrades  
6 are required, they are deemed to be “accelerated” into the study period and cost  
7 allocations will be calculated as defined in Part b).  
8
- 9 b) The cost of acceleration of the Transmission Expansion Plan will be determined by the  
10 Cumulative Present Value difference between the Transmission Expansion Plan and the  
11 accelerated Transmission Expansion Plan, which would include any incremental  
12 transmission system upgrades.  
13
- 14 c) Numerical examples are summarized as follows:  
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- 16 i) The case involving the addition of a 10 MW data centre load in Labrador East,  
17 starting in 2021 is provided in LAB-NLH-101, Attachment 1. The cost of acceleration  
18 in this case is estimated to be approximately \$4.4 million. This cost reflects the  
19 following:  
20
- 21 • The upgrade of Happy Valley power transformers has been advanced to  
22 2042. The cost of this project is estimated to be \$5 million.  
23
  - 24 • There will be an incremental operations and maintenance cost due to the  
25 requirement of 10 MW of temporary generation at Happy Valley. This  
26 generation is required each summer and will supplement generation from  
27 the Happy Valley Gas Turbine in support of maintenance of 138 kV  
28 transmission line L1302 between the Muskrat Falls Terminal Station 2 and

1                                   the Happy Valley Terminal Station. Annual costs include assumed unit  
2                                   rental fees and preliminary fuel consumption estimates.

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4                   ii) The case involving the addition of a 30 MW data centre load in Labrador West,  
5                   starting in 2021 is provided in LAB-NLH-101, Attachment 2. The cost of acceleration  
6                   in this case is estimated to be approximately \$12.5 million. This interconnection  
7                   requires the incremental capital upgrades as summarized in Newfoundland and  
8                   Labrador Hydro's ("Hydro") response to LAB-NLH-093 at a cost of \$16.6 million.<sup>1</sup>  
9                   These upgrades would be placed in service in 2021.

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11                   d) To provide the requested example, Hydro would need to have a baseline expansion  
12                   plan for the relevant period. A baseline expansion plan is not available for that time frame,  
13                   and the retroactive analysis necessary to provide an answer to this hypothetical would be  
14                   unduly onerous. Hydro is unable to provide the requested example.

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<sup>1</sup> It is assumed that all baseline upgrades have been placed in service to meet the Baseline Load Forecast.