

- 1 **Q. (Reference CA-NP-030, Attachment A) Please comment on the impact of the**  
 2 **following scenarios on the supply to: 1) Memorial University, and 2) NP**  
 3 **customers other than Memorial University.**  
 4 **a) Removal of transmission line 12L from service.**  
 5 **b) Removal of transmission line 14L from service.**  
 6 **c) Removal of both transmission lines 12L and 14L from service.**  
 7 **d) Removal of the MUN Substation from service.**  
 8 **e) Removal of MUN T-1 from service.**  
 9 **f) Removal of MUN T-2 from service.**  
 10 **g) Removal of both MUN T-1 and MUN T-2 from service.**  
 11  
 12 A. a) See the response to Request for Information PUB-NP-053.  
 13  
 14 b) See the response to Request for Information PUB-NP-053.  
 15  
 16 c) The St. John's 66 kV network has been designed with sufficient transmission  
 17 redundancy to prevent cascading outages and large load loss in St. John's in the  
 18 event of a single transmission line outage. A loss of both transmission line 12L and  
 19 14L would represent an N-2 scenario. Such an event would lead to an outage to  
 20 Memorial ("MUN") Substation and cause an outage of all Memorial University load  
 21 supplied by MUN Substation.  
 22  
 23 An outage to both 12L and 14L would also make the St. John's 66 kV transmission  
 24 network vulnerable to any further transmission line failures which could cause  
 25 cascading outages to thousands of customers served by other substations within the  
 26 St. John's 66 kV transmission network. See the response to Request for Information  
 27 PUB-NP-053 for further information on the St. John's 66 kV transmission network.  
 28  
 29 d) See the response to part c) above.  
 30  
 31 e) MUN Substation contains two power transformers, MUN-T1 and MUN-T2. MUN-T1 is  
 32 a 57-year-old power transformer that continues to supply load at Memorial  
 33 University. MUN-T2 was a 47-year-old power transformer that failed in 2022 and is  
 34 currently not in service.<sup>1</sup> Memorial University is able to continue to supply load from  
 35 MUN Substation using a combination of the MUN-T1 transformer capacity and Long  
 36 Pond ("LPD") Substation transformer LPD-T1 capacity.<sup>2</sup> If MUN-T1 were to be  
 37 removed from service in current circumstances, Memorial University would  
 38 experience an outage to all load supplied by MUN Substation. Once MUN-T2 is  
 39 replaced, MUN-T1 will still be required to supply forecast load at Memorial  
 40 University.<sup>3</sup>

<sup>1</sup> MUN-T2 is being replaced in 2024. See Board Order No. P.U. 14 (2023).

<sup>2</sup> Construction of the LPD Substation was approved by the Board in Order No. P.U. 5 (2019). The LPD Substation was considered to be a special facility in accordance with Newfoundland Power's *Schedule of Rates, Rules and Regulations, Effective July 1, 2023*. As such, the cost of the LPD Substation was fully contributed by Memorial University.

<sup>3</sup> See the response to Request for Information CA-NP-008 filed in relation to Newfoundland Power's *Supplemental Capital Expenditure Application – Memorial Substation Power Transformer Replacement*.

Requests for Information

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- 1           The loss of any transformer at MUN Substation would not have any effect on  
2           customers other than Memorial University.  
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4           f) See the response to part e) above.  
5  
6           g) See the response to part e) above.