

1 Q. Has any attempt been made to obtain backup equipment that could be used to  
2 mitigate the consequences of a transmission failure in Labrador East, or to reduce  
3 the time during which the line would be out of service in the event of such a  
4 failure? If not, why not?

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7 A. Hydro does not have a back up policy for the loss of a radial transmission line, nor  
8 has the Board provided guidance or an order with respect to any level of back up  
9 for a radial transmission system. The least cost option for supplying “remote”  
10 locations from the interconnected network is a radial transmission line. By its very  
11 nature the loss of the radial line results in customer outage. Hydro does maintain  
12 limited spare transmission line components to assist in the restoration of a  
13 transmission line following loss of a support structure(s). Given the delivery time  
14 for new power transformers, on the island Hydro does maintain spare transformer  
15 capacity in multi-transformer stations and utilizes a back-up mobile transformer in  
16 single transformer stations. In Labrador East, spare transformer capacity is  
17 maintained in the Happy Valley terminal station in conjunction with the gas turbine  
18 for loss of a 50 MVA unit. However, at the interconnection point in Churchill Falls  
19 transformer capacity is limited with the loss of the 125 MVA transformer given that  
20 the backup is the hot stand-by unit at 42 MVA plus generation from the 25 MW  
21 Happy Valley gas turbine.

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23 The issue of level of “local back up” for loss of a radial transmission line is one of a  
24 balance between reliability (i.e. unavailability and expected unserved energy) and  
25 the impact on rates (i.e. how much are the customers willing to pay to improve  
26 reliability).