

**2018 Capital Budget Application – Muskrat Falls to Happy Valley Interconnection Project**

1 Q. **Re: Labrador East Reliability Plan, Monthly Status Report, December 17, 2018,**  
2 **page 2**

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4 Citation: 2.3 Inspections of L1301/L1302

5 Status: Ongoing

6 Progress to Date: Ongoing

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8 Hydro has carried out infrared inspection of all line splices on L1301/L1302, with no  
9 defective splices discovered. Hydro has carried out several aerial patrols, most  
10 recently on November 5, 2018. No additional deficiencies were identified from the  
11 last aerial patrol. Patrols will continue at six-week intervals throughout the 2018-  
12 2019 winter season, with the next patrol scheduled for December 19, 2018.

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14 a) Have any deficiencies been identified in L1301/L1302 since these regular  
15 inspections began? If so, please provide a list of all such deficiencies identified  
16 and the corrective measures that were taken.

17 b) Given these findings and the ongoing inspection protocol, please provide  
18 Hydro's best estimate of the probability of a major outage of the L1301/L1302  
19 during winter 2018/19 and 2019/20.

20 c) Does Hydro own and operate any other radial transmission lines constructed in  
21 the 1970s or earlier? If so, please identify each one, and the refurbishments  
22 currently planned (if any), including estimated commissioning date and capital  
23 cost.

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26 A.

27 a) A list of deficiencies on L1301/L1302 found since aerial patrols began in 2018,  
28 along with the associated corrective actions, is included in Table 1.

Table 1: L1301/L1302 Deficiencies and Corrective Actions

Structure Number	Deficiency Identified	Corrective Action Taken
41	Damaged Crossarm	Repair Crossarm
42	Damaged Deadend Connection	Replace Deadend Connection
228	Damaged Crossarm	Replace Crossarm
387	Damaged Ground Wire	Replace Ground Wire on Right Crossarm
451	Damaged left pole	Replace Left Pole
452	Damaged Crossarm	Repair Crossarm
491	Damaged Crossarm	Replace Crossarm
502	Damaged Insulators	Replace all Insulators
506	Missing Cotter and loose pin	Replace Left Phase Cotter Pins
532	Damaged Crossarm	Repair Crossarm
572	Broken Guy Anchor	Replace Guy Wire and Anchors
614	Damaged Crossarm	Repair Crossarm
637	Missing cotter key on conductor clamp	Replace Cotter Key on Conductor Clamp
656	Missing cotter key on conductor clamp	Replace Cotter Key on Conductor Clamp
771	Loose Crossbrace	Tighten Center bolt in Crossbrace.
772	Damaged Right Pole, Missing Cotter Key	Replace Right Pole (60/2). Replace Cotter Key on Left Phase.
775	Loose Crossbrace	Tighten Crossbracing
797	Missing Guy Guards	Replace Guy Guards (6)
819	Damaged Crossarm	Repair Crossarm
1137	Damaged Crossarm	Replace Crossarm
1172	Damaged Crossarm	Replace Crossarm
1264	Damaged guy wire and anchors	Replace Guy Wire and Anchors

1           b) Prediction of a major outage is not possible. Short-term outages due to failure  
2           of an individual component under normal loading conditions are possible,  
3           although increased inspection reduces the probability of these outage types.  
4           Major outages would typically be due to meteorological events that cause  
5           structural overload beyond design capability causing failure of multiple  
6           structures. The probability of such a meteorological event is not related to  
7           maintenance inspections.

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- 1 c) The capital project under consideration pertains to the transmission reliability
- 2 and capacity in Labrador East; Hydro’s other transmission assets are not
- 3 relevant to this proceeding.