

1 **Reference: Tab 2.2: Substation Spare Transformer Inventory**

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3 **Q. Footnote 25 on page 12 notes that SPO-T4 and SPO-T5 provide N-1**  
4 **redundancy criteria. Please describe how N-1 criteria is applied by**  
5 **Newfoundland Power in relation to its power transformers.**

6  
7 A. Newfoundland Power's historic substation design practices have not normally applied  
8 N-1 criteria to its power transformers. Newfoundland Power uses portable substations  
9 and an inventory of spare power transformers to respond to in-service failures.<sup>1</sup>

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11 Newfoundland Power's Salt Pond Substation ("SPO") supplies power to six substations  
12 along the 66 kV looped transmission system on the Burin Peninsula. Power transformers  
13 SPO-T4 and SPO-T5 are 138/66 kV power transformers that are supplied by  
14 Newfoundland and Labrador Hydro's 138 kV transmission system. As outlined in  
15 Newfoundland Power's *2002 Supplementary Capital Budget Application*, N-1 criteria was  
16 applied to the SPO-T4 and SPO-T5 power transformers as the least cost alternative to  
17 address reliability of supply issues for customers served by the 66 kV transmission  
18 system on the Burin Peninsula.<sup>2</sup>

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<sup>1</sup> For further details, refer to report *2.2 Substation Spare Transformer Inventory*.

<sup>2</sup> See the *2002 Supplementary Capital Budget Application, Schedule A* for an assessment of alternatives to address the reliability of Newfoundland Power's 66 kV transmission system on the Burin Peninsula.