

1 Q. Does Hydro currently have spare parts available for the excitation systems of Unit 1  
2 and Unit 2 and has Hydro investigated the availability of spare parts for purchase to  
3 bridge the gap until the in-service date of Muskrat Falls?  
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7 A. Hydro has spare parts available for the control section only. Hydro has investigated  
8 the availability of spare parts for purchase to bridge the gap until the in-service date  
9 of Muskrat Falls; however, as per Appendix A, page 1 of this supplemental capital  
10 budget proposal, currently and going forward there is "*limited spare part*  
11 *availability and long delivery time*" for all aspects of the excitation system. Parts  
12 required in the future may not be available. In addition, stocking additional spare  
13 parts will not improve the reliability of the existing exciters as the parts currently  
14 available from ABB do not cover pieces that are non-user replaceable and therefore  
15 does not cover the complete control section. ABB does not offer refurbishment  
16 services.

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18 Hydro has experienced two recent exciter failures, in October 2016 and in  
19 December 2016, which required advanced troubleshooting and diagnostic  
20 knowledge from ABB. As per Appendix A, page 1, future issues with the Unitrol P  
21 system would be reliant on the "*limited support and service resources, which will*  
22 *diminish as the years go by*". There is an increasing risk of failure and associated  
23 unit downtime, which could see a Holyrood unit off line in a peak period while  
24 repairs are being made. The limited support available could mean extended repair  
25 durations as well.

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27 Upgrading to the Untriol 6080 exciter controls would improve unit reliability and  
eliminate the uncertain future of parts and service availability.