

1 Q. Further to PUB-NLH-450, please provide copies of any risk analysis or “*risk*  
2 *matrices*” completed on the critical spare requirements for each of the following:  
3 the Holyrood generating station, the gas turbines and hydro generation facilities.  
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6 A. The determination of critical spares requirements is at different stages of  
7 refinement for each of the three areas but all are using similar risk analyses. In  
8 order to properly identify the most critical spare parts to have on hand, it is vital to  
9 establish the most important assets first. To that end, Hydro has performed a  
10 thorough asset criticality risk analysis customized to suit the individual aspects of  
11 the three areas listed above. The analysis considered various factors, which could  
12 potentially be impacted should a particular asset fail while in service. The asset  
13 criticality factors for the Holyrood Thermal Generating Station and gas turbines are  
14 found in Attachments 1 and 2 to Hydro's response to PUB-NLH-450. Hydro  
15 generation followed the same factors as those utilized for gas turbines. Each of the  
16 factors were scored and multiplied together to give a total score for ranking the  
17 criticality of the asset being analyzed.  
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19 Based upon the asset criticality risk analysis described above, each critical asset was  
20 broken down into parts, which could fail and render the asset out of service. Each  
21 identified part was then run through a process to rank risk on the basis of the  
22 certain factors, including, as applicable:

- 23 • Lead time to acquire the part;
- 24 • Number of potential suppliers;
- 25 • Ability to predict the failure; and
- 26 • Technical specifications available in house.

1 A complete listing of the identified critical spares was prepared and compared to  
2 the listing of parts currently held in inventory by Hydro to identify any gaps. The  
3 listing of parts to be procured is further scrutinized to establish the probability of  
4 such parts actually being required (i.e., what is the probability of the part failing and  
5 taking the critical asset out of service). It is prudent to scrutinize the critical spares  
6 listing before procurement of the entire listing of parts.

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8 The results of this analysis for each of the Holyrood Thermal Generating Station,  
9 hydro generation and the gas turbines are included in Attachments 1 to 3 to Hydro's  
10 response to PUB-NLH-452.