

1 Q. **Upgrade Excitation Systems Units 1 and 2 (C-22; Tab 9 of Volume 2)**

2 Hydro outlines at p. 7 that there have not been any unit trips or outages due to
3 Unitrol P Excitators on Units 1 and 2. It further outlines on p. 7 an alternative would
4 be to purchase extra spare parts based on consumption to date. Given that there
5 have been no outages, why is not seeking additional spare parts a viable alternative
6 particularly given that spare parts can be purchased in 2013?

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9 A. Although there have not been any unit trips or forced outages due to the Unitrol P
10 Exciters on Units 1 and 2, there have been a total of 15 electronic cards and
11 couplers that have failed since 2008. These cards had to be replaced. The
12 breakdown is:

- 13 • 2 ArcNet Couplers, Part No. UNS6072;
- 14 • 1 Conduction Monitoring Card (Non-stock part), Part No. UNS0673;
- 15 • 3 Digital ArcNet Cards, Part No. UPC090;
- 16 • 4 Converter Electronics Cards, Part No. UNS3670;
- 17 • 3 Control Electronics Cards, PPC322BE01, Part No. HIEE300900R0001; and
- 18 • 1 Pulse Generator Card, Part No. GDB021.

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20 Spare parts inventory could be increased but if they are consumed within the
21 remaining operating period for Units 1 and 2 other parts may not be available,
22 when needed, from ABB Inc.