

1 Q. Sunnyside Replacement Equipment: If no analyses of spare transformers for the
2 two 230kV loops was performed, please explain why not.

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5 A. System Planning Criteria require that there is sufficient capacity within each loop to
6 withstand the loss of the largest transformer. Each year, transformer-loading levels
7 are assessed for the current year and the subsequent four years utilizing the current
8 Hydro and Newfoundland Power infeed load forecasts. Any capacity deficiencies are
9 identified and requirements for new transformers are added to Hydro's annual
10 capital budget and five-year plan process.

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12 Hydro's experience is that planning the deployment of power transformers based
13 on an N-1 contingency is prudent from both a system reliability and cost standpoint.
14 A cost/benefit analysis of the requirement for spare transformers for the two
15 230/138 KV loops is currently underway.

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17 As noted in Hydro's *Response to the Phase I Report by Liberty Consulting*, filed
18 February 6, 2015, in the *Investigation and Hearing into Supply Issues and Power*
19 *Outages on the Island Interconnected System* proceeding, a risk-of-failure
20 assessment program was commissioned. The first phase of the study was
21 completed by ABB in 2014 and included a review of 30 power transformers that
22 were designated Priority A transformers for review. The second phase of the study
23 is scheduled to be completed in 2015 and will include 30 Priority B power
24 transformers.

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26 The results of the study will allow for the identification of transformers that present
27 an elevated risk of failure or that display conditions that would require an extended

- 1 removal from service. These results will be used by Hydro to perform an enhanced
- 2 risk assessment relating to transformers and to identify requirements for the
- 3 purchase of any replacement and/or spare transformers.