

1 Q. Reference: ***Combustor Inspection Major and Overhaul, Holyrood Combustion***
2 ***Turbine report, August 29, 2016, page 2***

3 *“The Holyrood CT provides several critical functions in reliably supplying customer*
4 *demand requirements. It is operated to support spinning reserves on the Island*
5 *Interconnected System and provides a critical backup in the event of a contingency,*
6 *such as the loss of a major generating unit or the loss of a major transmission line.”*

7 Please provide a detailed explanation of Hydro’s definition of, and approach to,
8 spinning reserve. In the response, please indicate what generation and demand side
9 resources are included, and how Hydro’s practice compares to other Canadian
10 jurisdictions such as the practices of the Alberta Electric System Operator and the
11 Ontario Independent Electricity System Operator, as well as American jurisdictions
12 using North American Electric Reliability Corporation standards.

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15 A. Hydro defines spinning reserve as unloaded generation that is synchronized to the
16 power system and ready to serve additional demand. Hydro maintains spinning
17 reserve of 170 MW on the Island system in order to cover the single worst
18 contingency of the loss of the largest generating unit. The generation and demand
19 side resources, as well as the dispatch order, utilized in the normal maintenance of
20 reserves and under emergency conditions are outlined in Hydro’s instruction T-
21 001¹. Hydro would start all but one of its standby units prior to using demand side
22 resources for the maintenance of reserves as the latter is a limited resource
23 intended to be used under emergency conditions only.

¹ Please refer to Hydro’s response to NP-NLH-002, Attachment 1.

1 As the Newfoundland system continues to be operated as an electrically islanded
2 system, Hydro submits that it is not practical to compare its spinning reserve
3 practices to utilities in other jurisdictions, operating as a part of larger
4 interconnected systems. These latter utilities generally have the ability to call on
5 neighbouring utilities under reserve sharing arrangements when short term
6 reserves are needed to mitigate loss of supply due to generation loss or loss of
7 critical transmission while other available units are brought on-line. Hydro submits
8 that the positioning of the system to withstand a single worst contingency to avoid
9 sustained customer interruption is consistent with best practices. Hydro is currently
10 reviewing its spinning reserve practices and associated procedures in preparation
11 for the Labrador and Maritime interconnections in 2017/2018. As part of this
12 exercise, it is Hydro's intention to seek agreement with neighbouring utilities to
13 participate in reserve sharing arrangements that would be of mutual benefit to
14 Hydro and the participating utilities.