Q. Please explain why Hydro did not believe the procurement of new FD fan motors was appropriate after the AMEC conclusions in 2011 and why a “run to failure” strategy was deemed appropriate.

A. A "run to failure" approach was not followed by Hydro with respect to the FD fan motors at the Holyrood Thermal Generating Station.

The procurement of a spare FD fan motor was not fully justified as noted in Hydro's response to PR-PUB-NLH-012. Hydro also notes that the failure of the FD fan motor alone would not have resulted in a service interruption to customers. The potential impact of the loss of the FD fan (absent other extenuating circumstances) was considered as part of prioritization of FD fan motor work and the decision whether to procure a spare FD fan motor. Please see the summary of Hydro's project prioritization criteria as found in *Newfoundland and Labrador Hydro’s Response to the Phase I Report by Liberty Consulting (the Hydro Reply)*, which is attached as PR-PUB-NLH-145 Attachment 1, in particular, the customer impact measures noted therein.

TABLE 5.1 LIBERTY'S CONCLUSIONS & RECOMMENDATIONS - T&D SYSTEM PLANNING & PROJECT PRIORITIZATION		
RELATED CONCLUSION(S)	**RECOMMENDATION**	
Hydro uses IEEE Standard transmission and distribution conductor and transformer capacities for planning and operating its electric systems, which conforms to good utility practices (4.17). Hydro allows limited temporary overloading of its transmission lines and its terminal station transformers, but limiting the "hot spot" temperature to 110°C appears to be unduly conservative (4.18). Practices for transmission system raptor protection, lightning protection, and galloping conductor prevention have conformed to good utility practices (4.21).		

5.1.1 Hydro's Project Planning Criteria

Hydro's established process for prioritizing capital projects uses both quantitative and qualitative criteria, and follows a two tiered approach. Consideration is first given to any projects that are required to correct an extreme safety issue, to meet mandatory demands (e.g., legislative), or to satisfy reliability-related system load growth requirements. If any of these three factors exists the project is considered high priority and is placed at the top of the prioritization list. All other projects are assigned to the second tier and are assessed against 12 criteria, each of which is assigned a point value. These values collectively add up to 1,000. A number of factors are identified for each criterion and are assigned a weighting relative to the maximum weighting of the criterion.

Two of the 12 assessment criteria specifically address customer impacts.

1) Continue Service to Customers
    a. Service to customers can continue without the project
    b. Service to customers can continue but with high costs
    c. Service to customers cannot continue without the project

2) Number of customers impacted

   a. The project will impact (benefit) up to 100 customers
   b. The project will impact up to 1,000 customers
   c. The project will impact up to 10,000 customers
   d. The project will impact more than 10,000 customers

Four other criteria are not customer-specific, but they address system impacts from a reliability, duration, and loss of facilities standpoint, and are therefore relevant from a customer impact standpoint.

3) System impact

   a. The project is not critical to any particular system.
   b. The project is critical to a system, but a standby unit can be used to maintain operation or support in the event of failure.
   c. The project is critical to the proper operation of a generating plant or a terminal station.
   d. The project is critical to ensure the reliable operation of the Hydro system.

4) Impact Intensity

   a. Minor - If this project does not proceed, the repair time is *less than half* the Maximum Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or two days (whichever comes first).
   b. Moderate - If this project does not proceed, the repair time is *greater than the half but less than 90%* of the Maximum Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever comes first).
   c. Significant - If this project does not proceed, the repair time is *within plus or minus 10%* of the Maximum Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever comes first)
   d. High - If this project does not proceed, the repair time *exceeds by more than 10%* the Maximum Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever comes first).

5) Loss Type

   a. No type
   b. Equipment …
   c. Facility …
   d. Production – If the project does not proceed, there exists a risk of the loss of production at a Hydro generating plant.
   e. Customer Delivery – If the project does not proceed, there exists a risk of being unable to deliver power to Hydro customer(s).

6) Loss Mitigation

   a. Redundant unit - If the project does not proceed the expected loss will be mitigated by a redundant unit present on the system.
   b. Back-Up Option - If the project does not proceed the expected loss will be mitigated by a back-up option which ensures that service continues.
   c. Nothing - This project is required because there is no available means to mitigate the expected loss.

The six criteria noted above collectively account for 47% of the total weight assigned to the 12 assessment criteria. Included in the remaining criteria are factors that address the safety and environmental aspects of capital projects (with a combined weighting of 20%), as well as criteria that evaluate the payback period and net present value from a cost/benefit perspective (a combined weighting of 17%).

5.1.2 Recommendations by Liberty Consulting

Hydro acknowledges and agrees with Liberty's conclusions 4.9, 4.10, 4.11, 4.12, 4.16, 4.17, 4.18, and 4.21. Collectively, these conclusions confirm that Hydro's standards, practices and processes related to the planning and design of its transmission and distribution systems are in conformance with good utility practice.

Liberty's conclusions 4.7 and 4.8, and the associated recommendations 4.3 and 4.4, speak to the manner in which the frequency and duration of customer interruptions are considered in the prioritization of transmission and distribution projects. As discussed above in section 5.1.1, customer impacts are considered in Hydro's project ranking process to a significant extent. However, Hydro acknowledges that customer interruption frequencies and durations and SAIFI and SAIDI are not specifically incorporated into the assessment. On this basis, Hydro agrees with Liberty's conclusions 4.7 and 4.8 and with recommendations 4.3 and 4.4. Hydro will adopt these recommendations and will review its capital project ranking process in 2015 with these considerations in mind.

With respect to Liberty's conclusion 4.18, Hydro will incorporate a review of its practices regarding its current limitations on "hot spot" temperatures into its 2015 workplan.