

1 Q. Please provide details of Hydro's planning and operating criteria and associated
2 time frames for supply to a transmission constrained area. Specifically, provide
3 details of Hydro's current planning and operating criteria for supply to the Avalon
4 Peninsula.

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7 A. Hydro plans and operates the bulk transmission system, including transmission
8 constrained areas, using the N-1 contingency criteria. The bulk transmission system
9 is operated by dispatching generation and planning transmission equipment
10 outages such that the system is able to withstand any single contingency loss of
11 equipment scheduled to be in operation. In doing this, there would be no loss of
12 customer supply, stability is maintained and voltages are within acceptable levels.
13 The notable exception to this is that under the current situation with no
14 interconnection to neighbouring power systems, there can be a short-term
15 customer load interruption through under-frequency load shedding for the sudden
16 loss of a large generating unit.

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18 To ensure the N-1 contingency criteria are met for the Avalon Peninsula, Hydro's
19 operating criteria includes the operation of units in the Holyrood Thermal Station.
20 Load flow analyses have been completed to determine the different Avalon load
21 levels requiring the operation of 1, 2 or 3 units at Holyrood for a variety of system
22 conditions such as the availability of voltage regulating equipment, the availability
23 of the gas turbine at Hardwoods and wind generation availability. Based on these
24 analysis and Avalon Peninsula load forecasts, Hydro ensures the appropriate
25 number of Holyrood units are scheduled to be online at all times and will dispatch
26 accordingly.

On an annual basis, Hydro prepares a Master Outage Schedule, which outlines the maintenance and capital project equipment outage requirements for the transmission system, including the transmission lines supplying the Avalon Peninsula. This schedule would also have suggested outage times for each piece of equipment.

Through an iterative approach of review with maintenance planners and project managers, a final outage schedule is developed and approved by the System Operations department. For transmission line outages on the Avalon Peninsula, which include parallel lines TL202 and TL206, TL203 and TL207/TL237 and TL201 and TL217, System Operations would ensure the following:

1. With the current operating load forecast, the required Holyrood units are online.
2. The Hardwoods GT is tested and available before proceeding with the outage.
3. Confirm a recall time for the outage. This is dependent on the nature of the work being completed but it is typically two hours.
4. Review the weather forecast for any pending weather. Hydro would not proceed with the outage if the weather forecast is not favorable.
5. Review documented restoration plans in the event the parallel line trips on a forced outage.
6. Discuss the outage with Newfoundland Power (NP). This would include information on restoration plans (mentioned in #5), the availability of NP hydro generation and the status of any equipment NP may have that could impact the outage.
7. If the outage affects a transmission line connected through the Come By Chance Terminal Station which supplies NARL, or the transmission line

1 supplying Vale (TL208), direct communication would be made with NARL
2 and/or Vale.

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4 It should be noted that in the event of an unlikely trip of the remaining in service
5 line, Hydro will have a contingency plan in place to restore customers as soon as
6 possible. Such plan will be developed on a case-by-case basis.