

1 Q. With respect to Thermal Generation Requests, which of Hydro’s transmission line corridors
2 would require Newfoundland Power’s thermal generation in Greenhill, Wesleyville and Port aux
3 Basques to be placed online?

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6 A. The Newfoundland Power Inc. (“Newfoundland Power”) thermal generation facilities at
7 Greenhill, Wesleyville, and Port aux Basques can provide backup supply, help mitigate
8 equipment overloads and avoid low-voltage conditions following certain contingency events on
9 the Island Interconnected System. This support can reduce Newfoundland Power customer
10 outages, limit adverse impacts on power system equipment, and improve system voltage
11 performance. Table 1 summarizes the applicable Island Interconnected System contingencies,
12 their initial system impacts, and the role of Newfoundland Power thermal generation in
13 mitigating these effects.

Table 1: Applicable Island Interconnected System Contingencies

Island Interconnected System Contingency	Initial Impact of Contingency	Back-up Newfoundland Power Generation	Benefits of Dispatched Generation
Loss of a STBTS ¹ Power Transformer	Transformer Overload of the other STB Transformer	Greenhill/ Wesleyville	Mitigates Transformer Overload ²
Loss of a SSDTS ³ Power Transformer	Transformer Overload of the other SSD Transformer	Greenhill/ Wesleyville	Mitigates Transformer Overload ⁴
Loss of Transmission Line TL219	Potential Low Voltages on Burin Peninsula depending on System Conditions	Greenhill	Mitigates Low Voltage Conditions ⁵
Loss of Transmission Line TL214 or Loss of DLSTS ⁶ Power Transformer	Loss of Supply to Doyle’s, Grand Bay, Port aux Basques and Long Lake Stations	Port aux Basques	Enables partial load restoration, depending on available generation.
Loss of Transmission Line TL215	Loss of Supply to Grand Bay, Port aux Basques and Long Lake Stations	Port aux Basques	Enables partial load restoration, depending on available generation.

¹ Stoney Brook Terminal Station (“STBTS”).

² Based on the reference case forecast and Newfoundland Power’s proposed replacement of the Wesleyville Gas Turbine and Greenhill Gas Turbine.

³ Sunnyside Terminal Station (“SSDTS”).

⁴ *Supra*, f.n. 2.

⁵ *Supra*, f.n. 2.

⁶ Doyle’s Terminal Station (“DLSTS”).