

1 **Q. The Applicant would be aware of the second line coming on to the Avalon Peninsula**
2 **from Bay Despair and that there will be major changes to the interconnected system**
3 **if Hydro’s plans materialize. These matters are all being considered by the Board.**

4
5 **(a) Why is the Applicant bringing forward a request for additional \$13,000,000 for**
6 **an MGT at this particular time, in these circumstances?**

7
8 **(b) The Applicant is primarily a distributor of electricity on the Island**
9 **Interconnected System. Is it the jurisdiction of the Applicant to be seeking**
10 **sources for backup as described in the Applicant pertaining to the MGT.**

11
12 **(c) Are issues pertaining to backup within the jurisdiction of Hydro and currently**
13 **before the Public Utilities Board?**

14
15 **A. A. Emergency Generation Generally**

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17 Under the provisions of the *Public Utilities Act*, Newfoundland Power has an obligation
18 to provide safe, reliable service to its customers. Under the provisions of the *Electrical*
19 *Power Control Act, 1994*, Newfoundland and Labrador Hydro (“Hydro”) has the
20 exclusive right to supply the Company’s wholesale power requirements; however, this
21 right is subject to exceptions for generation facilities used for emergency circumstances.¹
22 This exception for emergency generation reflects the reality that Newfoundland Power
23 may require generation facilities to respond to, or avoid, an emergency condition that
24 may be created for customers by loss of electrical service. Emergency conditions arise
25 from there being insufficient power to meet the needs of customers, whether from the
26 loss of use of generating, transmission, or distribution facilities.²

27
28 Newfoundland Power is aware of: (i) Hydro’s 230kV transmission line TL267, which is
29 currently under construction between Hydro’s Bay D’Espoir hydroelectric generating
30 facility and the Western Avalon terminal station; and (ii) the changes to the Island
31 Interconnected System that are expected in the next few years.³ TL267 and the changes
32 that are expected in the coming years may improve the reliability of wholesale power
33 supply on the Island Interconnected System. The future reliability of the Island

¹ See *Electrical Power Control Act, 1994*, Section 14.1(4).

² See *Electrical Power Control Act, 1994*, Section 3(c).

³ The changes expected on the Island Interconnected System include: (i) the addition of the 824 MW Muskrat Falls hydroelectric plant in Labrador; (ii) the addition of the 900 MW Labrador Island Link transmission line between Muskrat Falls and Soldiers Pond; (iii) the addition of the 500 MW Maritime Link transmission line between Newfoundland and Nova Scotia; and (iv) the decommissioning of the 490 MW Holyrood Thermal Generation Station.

1 Interconnected System is currently the subject of a comprehensive investigation by the
2 Board, in which Newfoundland Power is an active participant.⁴
3

4 Should Hydro and its affiliates' planned changes to the Island Interconnected System not
5 result in reasonable reliability of service to customers, then it is possible that
6 Newfoundland Power would be obliged to arrange sufficient emergency generation
7 supply to ensure it can reasonably fulfill its obligation to serve its customers in all
8 conditions. Any such arrangements would be subject to the Provincial power policy and
9 regulatory oversight as provided in the *Electrical Power Control Act, 1994* and the *Public*
10 *Utilities Act*, respectively.
11

12 B. Responses

13
14 (a) The MGT is approaching the end of its service life. The MGT provides
15 Newfoundland Power the capability to respond to, or avoid, emergency conditions
16 created for its customers by loss of electrical service. This most often requires
17 deployment of the MGT in rural portions of Newfoundland Power's service
18 territory, which will not be affected by Hydro's new 230 kV transmission line
19 TL267.
20

21 For example, in the summer of 2015, the MGT operated in Twillingate during a
22 series of maintenance outages on transmission lines 114L and 140L. During these
23 outages, the MGT supplied approximately 1,700 customers and avoided 6.2
24 million customer minutes of outage.⁵ Had the MGT not been available, *all*
25 customers in the Twillingate area would have experienced a loss of power for 8 to
26 16 hours a day, on 6 days during the tourism and fishery seasons.
27

28 Failure to replace the MGT at the end of its service life would place
29 Newfoundland Power in the position of being unable to provide reasonably
30 reliable service to its customers due to a lack of adequate emergency generating
31 facilities.⁶ For this reason, Board approval of replacement of the MGT is timely.

⁴ On February 5, 2014, the Board commenced its *Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System* as a result of events that occurred in late December 2013 and early January 2014. On October 8, 2014, the Board divided its investigation into two phases. Phase One related to the immediate reliability issues for the Island Interconnected System and Phase Two addresses electrical system reliability following the interconnection of the Muskrat Falls hydroelectric facility. Phase Two is currently ongoing.

⁵ During such events, the Company works with the business community and local governments to ensure its mobile generating units are deployed in a manner that minimizes local disruption and avoids the creation of emergency conditions. This is particularly important given the rural Newfoundland economy is fueled by tourism and the fishery, and extended power outages during the summer construction season can negatively impact these industries.

⁶ Newfoundland Power's existing MGT is 43 years old. A condition assessment was conducted in 2015 and determined that the trailers that support and house the gas turbine components are in poor condition.

1 (b) It is appropriate for Newfoundland Power to own and operate a replacement for
2 the MGT as proposed in the Application. Such ownership is consistent with the
3 provisions of the *Electrical Power Control Act, 1994* and *Public Utilities Act* (see
4 **A. Emergency Generation Generally** above). Because the MGT is deployed on
5 Newfoundland Power’s distribution network, the Company’s ownership and
6 operation of the replacement is also consistent with the continued efficient overall
7 operation of the provincial electrical system.⁷
8

9 (c) Replacement of the MGT has been discussed by representatives of the electrical
10 system planning groups of Newfoundland Power and Hydro as part of routine
11 coordination of planning for the Island Interconnected System.⁸ It is appropriate
12 for Newfoundland Power to own and operate a replacement for the MGT as
13 proposed in the Application. Such ownership is consistent with the provisions of
14 the *Electrical Power Control Act, 1994* and *Public Utilities Act* (see **A.**
15 **Emergency Generation Generally** above).
16

17 End-of-life replacement of Newfoundland Power’s mobile generating facilities,
18 such as the MGT, is not currently a topic in the Board’s *Investigation and*
19 *Hearing into Supply Issues and Power Outages on the Island Interconnected*
20 *System*. Replacement of the MGT will simply permit Newfoundland Power to
21 maintain its *existing* emergency generating capability to avoid a degree of
22 localized loss of power for its customers. Given this, replacement of the MGT
23 would not, in Newfoundland Power’s view, be a suitable topic to be considered
24 by the Board in its much broader investigation into future reliability on the Island
25 Interconnected System.

⁷ The MGT operates at distribution-level voltages and can be deployed to any distribution feeder operated by the Company. Specifically, the MGT power transformer can be configured to operate at Newfoundland Power’s most common distribution voltages: 25 kV and 12.5 kV. The flexibility this provides contributes to the overall efficiency of the Company’s operations when responding to planned and unplanned outages. See Tab 1.2, Purchase Mobile Generation, Appendix A: Mobile Gas Turbine Condition Assessment, page A-2.

⁸ Discussion with Hydro regarding the replacement of the MGT has been ongoing at the Inter-Utility System Planning and Reliability Committee since 2015. Inclusion of the replacement MGT in Newfoundland Power’s 2018 Capital Budget Application was last discussed at the June 22, 2017 meeting of this committee.