

1 Q. **Re: 2017 GRA Compliance Application, Exhibit 3, page 7 (p. 71 pdf)**

2

3 **Citation:**

4

5 The off-island purchases forecast is materially lower (234 GWh) in the 2019 Test
6 Year as compared to the October 2018 Filing due to an extended outage of the
7 Labrador-Island Link forecast to take place during the period of May to October
8 2019 (inclusive), which results in lower than anticipated Recapture Energy
9 purchases. The duration of this outage was not known at the time of preparation
10 of the supply cost forecast included in the October 2018 Filing.

11

12 a) Please explain reasons for this extended LIL outage, and why it was not foreseen in the
13 October 2018 Filing.

14

15 b) Please provide a copy of the document referred to in Note 31 ("Planned Outage for the
16 Labrador-Island Link," April 12, 2019).

17

18

19 A. a) Newfoundland and Labrador Hydro "Hydro" filed an update with the Board of
20 Commissioners of Public Utilities ("Board") on April 12, 2019, entitled "Labrador-Island
21 Link - Bipole Delivery Schedule and Planned Outage." This correspondence is provided
22 as Attachment 1 to this response. A further update on the status of the extended
23 outage of the Labrador-Island Link ("LIL"), including the reasons for the extended
24 outage and a revised schedule for its return to service, was provided in correspondence
25 from Hydro to the Board dated August 8, 2019. This correspondence is provided as
26 Attachment 2 to this response.

27

28 Hydro understood that the LIL was going to require an outage in 2019 to implement the
29 second pole of the bipole. However, it was not anticipated to be as long as GE
30 subsequently required for implementation of the bipole control and protection system.
31 GE requires this length of time to complete the construction and commissioning of the

1 second pole. Included in the construction and commissioning are the installation of
2 additional control cabinets, the wiring of these cabinets and terminating additional
3 wiring in the control cabinets installed as part of the monopole implementation. Also
4 included are the installation of limited functionality control software and the use of
5 that control software to check the wiring and communications to the devices used to
6 control, monitor and protect the equipment. Upon the receipt of the interim control
7 and protection software, this software will be installed and numerous off-line
8 commissioning activities will be completed prior to returning the LIL to service for on-
9 line commissioning.

10

11 b) Please refer to Attachment 1 of this response for a copy of Hydro's correspondence to
12 the Board dated April 12, 2019.



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April 12, 2019

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Ms. Cheryl Blundon
Director Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: Planned Outage for the Labrador-Island Link

In its correspondence of March 19, 2019, the Board of Commissioners of Public Utilities (the "Board") requested that Newfoundland and Labrador Hydro ("Hydro") suspend the filing of biweekly update reports containing information on the progress of the Labrador-Island Link. This letter is to provide information regarding the Labrador-Island Link bipole delivery schedule that was not available at the time of filing of the last biweekly update report on April 2, 2019.

Recent information from GE indicates that a period of outages and testing are required to meet bipole implementation in the fall of 2019. The major activities are:

- Implementation of version 17c monopole software beginning on May 1, 2019. This version has features required for the bipole software;¹
- Assessment of version 17c performance including a period of online testing with power transfers in late May 2019, to identify and correct any issues;
- Installation and testing of the hardware required for bipole operation in preparation of the installation of the factory tested bipole production software at the end of August 2019 ("August Bipole Software");
- Dynamic testing of the bipole software including required online testing with power transfers through September and October 2019; and
- Trial operations of the bipole beginning November 1, 2019.

¹ Version 17c will not remedy the current susceptibility to external ac faults, as detailed in Hydro's biweekly "Labrador-Island Link In-Service Update," April 2, 2019; however, there are crucial features in version 17c that are required for the bipole that are not in the software used this past winter. It is necessary to install and test these features to lessen the risk of related issues arising during bipole implementation.

Ms. C. Blundon
Public Utilities Board

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In order for GE to complete the activities outlined above, it is necessary for the Labrador-Island Link to be out of service for much of the period from May 1 to October 1, 2019. There will be a number of brief periods of re-energization within that time frame to assess performance of version 17c of the monopole software and to enable dynamic commissioning of the bipole facilities beginning in September 2019.

These developments in the testing process are necessary for implementation and satisfactory function of the Labrador-Island Link in bipole mode prior to winter 2019–2020.

The August Bipole Software will provide the required features for bipole operation at the power transfer levels available from Labrador this coming winter; however, additional software features will be required for the higher power transfers expected in 2020 (“Additional Bipole Software”). The development of Additional Bipole Software will occur over the fall of 2019 and is expected to be delivered during the winter of 2019–2020. Once it is ready, Hydro will coordinate with Nalcor to schedule additional bipole outages as required and to ensure cost-effective, reliable delivery of power to customers in order to implement and test the required features. At this time, the timing of these outages has not been determined.

As requested by the Board in its correspondence on March 19, 2019, Hydro continues to work with Liberty as part of “The Board’s Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System—Phase Two—Availability of Information and Ongoing Reporting and Monitoring” process. At Hydro’s next update meetings with Liberty Hydro will provide information on the remaining software features to be completed and any additional details available at that time on the above noted outages.

Hydro will continue to inform the Board on any material developments.

Should you have any questions, please contact the undersigned.

Yours truly,

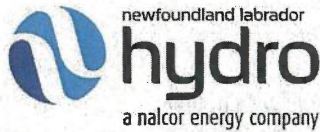
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August 8, 2019

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Ms. Cheryl Blundon
Director Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: Planned Outage for the Labrador-Island Link

In its April 12, 2019 correspondence, Newfoundland and Labrador Hydro ("Hydro") provided the Board of Commissioners of Public Utilities ("Board") with an update regarding the Labrador-Island Link ("LIL") bipole delivery schedule. The letter included information on anticipated activities through 2019 to facilitate the availability of the LIL for the 2019-2020 winter operating season.

Recent information from Nalcor Energy-Power Supply indicates that there have been changes to the schedule resulting in a delay of the testing and commissioning activities detailed in the April 12, 2019, correspondence.

The activities required for bipole implementation have not changed from those listed in Hydro's previous letter; the information below indicates the status of those activities including those completed and the most recent dates associated with remaining major activities.

- Implementation of version 17c monopole software. Complete. This version has features required for the bipole software.¹ Implementation began on April 30, 2019 and was completed with the line re-energized on May 25, 2019;
- Assessment of version 17c performance including a period of online testing with power transfers to identify and correct any issues. Complete. Online testing occurred from May 25 to June 4, 2019. Power transfers up to 140 MW were completed. The 17c version was found to correct some earlier identified deficiencies and highlighted additional work to be done for the bipole implementation;
- Installation and testing of the hardware required for bipole operation in preparation of the installation of the factory tested bipole production software ("Interim Bipole Software").² The outage work began on June 5, 2019. Field testing of equipment and points checking to the Energy Control Centre without power transfers are ongoing. The LIL will remain off-line until dynamic testing of the Interim Bipole Software begins;

¹ Version 17c was not intended to address the susceptibility to external ac faults, as detailed in Hydro's biweekly "Labrador-Island Link In-Service Update," April 2, 2019; however, it has crucial features that are required for the bipole that are not in the software used this past winter. It was installed to test these features to lessen the risk of related issues arising during bipole implementation.

² The software was referenced as "August Bipole Software," in the April 12, 2019 correspondence. The anticipated release date for this software is now mid- to late-October 2019.

Ms. C. Blundon
Public Utilities Board

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- Dynamic testing of the Interim Bipole Software including required online testing with power transfers. The dynamic commissioning is forecast to occur from mid-October 2019 through to mid-February 2020 (previously scheduled for September and October 2019); However, based on an assessment of progress to date, Nalcor Energy is anticipating dynamic testing of power transfers will not occur until early January 2020; and
- Trial operations of the bipole beginning February 16, 2020 (previously scheduled for November 1, 2019).

These developments remain necessary for implementation and satisfactory function of the LIL in bipole mode.

Hydro has also been advised that an outage will be required to commission the remaining software features required for the higher power transfers expected in 2020 ("Final Bipole Software").³ This outage is currently scheduled to occur in late-April through mid-May 2020.

To support the provision of reliable service to customers through the 2019-2020 winter season, Hydro is carrying out necessary work at the Holyrood Thermal Generating Station to help ensure that it is fully capable of providing maximum output this coming winter. This operating scenario falls within the range of scenarios considered in Hydro's most recent assessment of near-term generation adequacy.⁴

As requested by the Board in its correspondence on March 19, 2019, Hydro continues to work with Liberty Consulting Group as part of "The Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System – Phase Two – Availability of Information and Ongoing Reporting and Monitoring," process. At Hydro's next update meetings with Liberty Consulting Group, Hydro will provide information on the remaining software features to be completed and any additional details available at that time on the above noted outages.

Hydro will continue to inform the Board on any material developments.

Should you have any questions, please contact the undersigned.

Yours truly,

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³ This software was referenced as "Additional Bipole Software," in the April 12, 2019 correspondence.

⁴ "Near-Term Generation Adequacy Report" filed with the Board on May 15, 2019.