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December 15, 2023

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

Attention: Jo-Anne Galarneau
Executive Director and Board Secretary

Re: 2022 Energy Marketing Activities Conducted on Behalf of Newfoundland and Labrador Hydro

Enclosed please find Newfoundland and Labrador Hydro's ("Hydro") report entitled "2022 Energy Marketing Activities Conducted on Behalf of Newfoundland and Labrador Hydro."

Although Nalcor Energy ("Nalcor") remains a legally separate entity and its structure and subsidiaries are unchanged at this time, operationally, Nalcor is transitioning to the Hydro structure.¹ For clarity, the use of Hydro and Nalcor within this report is in reference to the regulated operations of Hydro and the Nalcor legal entity within 2022, respectively.

In the current operational structure, Energy Marketing now takes direction from Hydro. During the first half of 2022, Hydro assigned responsibility for water management activities to Energy Marketing to capture organizational efficiencies. Energy Marketing is accountable to Hydro to ensure that the security of supply for domestic load for Hydro's customers remains paramount in all decisions to ensure the delivery of least-cost, reliable service in an environmentally responsible manner.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

A handwritten signature in blue ink, appearing to read "S. Walsh", written over a horizontal line.

Shirley A. Walsh
Senior Legal Counsel, Regulatory
SAW/sk

Encl.

¹ "Newfoundland and Labrador Hydro Streamlines Executive Structure To Reduce Costs And Focus On Better Serving The Province," Newfoundland and Labrador Hydro, November 2, 2021.
<<https://nlhydro.com/newfoundland-and-labrador-hydro-streamlines-executive-structure-to-reduce-costs-and-focus-on-better-serving-the-province/>>.

ecc:

Board of Commissioners of Public Utilities

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2022 Energy Marketing Activities

Conducted on Behalf of Newfoundland and Labrador Hydro

December 15, 2023

A report to the Board of Commissioners of Public Utilities



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1 1.0 Introduction

2 In 2009, Nalcor Energy (“Nalcor”)¹ began trading in external markets via its energy marketing line of
3 business, Energy Marketing, a non-regulated entity created to market surplus provincial energy. In
4 preparation for the interconnection of the Island Interconnected System to the North American Grid,
5 Energy Marketing implemented the processes, technology, people, and commercial arrangements
6 necessary for increased participation in external markets. To maximize the value of provincial resources,
7 Newfoundland and Labrador Hydro (“Hydro”) and Energy Marketing began working together in 2018 to
8 ensure efficient production of electricity and optimization of existing assets. Upon interconnection,
9 Hydro was able to leverage Energy Marketing’s capabilities and resources to secure energy from
10 external markets to offset higher-cost production from on-island thermal resources and to export
11 energy from its system that would have otherwise been spilled.

12 In 2022, Energy Marketing provided various services to ensure Hydro’s customers benefit from the
13 interconnections to the North American Grid and associated access to external markets, including:

- 14 • Conducting analyses pertaining to water management and production scheduling, transacting in
15 external markets to assist Hydro in managing its energy supply and capacity requirements;
- 16 • Managing and executing ponding activities;
- 17 • Scheduling deliveries over the Labrador-Island Link; and
- 18 • General water management and energy marketing administrative activities.

19 Energy Marketing and Hydro's collaboration effectively maximized customer value by leveraging
20 interconnection benefits, while simultaneously prioritizing system reliability as the primary focus.

21 2.0 Energy Marketing Services to Hydro

22 2.1 Water Management and Production Scheduling

23 Energy Marketing formed the Water Management and Production Scheduling Group in January 2018.
24 During 2022, the Water Management and Production Scheduling Group was responsible for water

¹ On June 23, 2021, the Government of Newfoundland and Labrador announced that Nalcor operations would move under Hydro. For clarity, within this report the use of Hydro and Nalcor are in reference to the regulated operations of Hydro and the Nalcor legal entity, respectively.

1 management activities and provided Hydro with analyses and guidance for water management
2 decisions.

3 The Water Management and Production Scheduling Group was responsible for the following key
4 activities:

- 5 • Making recommendations on production scheduling, including the use of hydraulic and thermal
6 generation and imports, as required;
- 7 • Providing recommendations on hydraulic and thermal unit dispatch and scheduling;
- 8 • Preparing and issuing weekly generation guidelines for unit dispatch following the approval of
9 production recommendations by Hydro;
- 10 • Making decisions related to the controlled release of water within the Bay d’Espoir System and
11 making requests to the Energy Control Centre (“ECC”) or field staff to perform gate operations;
- 12 • Making decisions related to gate operation for the release of excess (spill) flow and making
13 requests to the ECC or field staff to perform gate operations;
- 14 • Preparing public notifications of spillway releases;
- 15 • Making recommendations for exports to avoid spill;
- 16 • Making gate operation decisions related to the release of flows to meet fisheries flow
17 requirements and making requests to the ECC or field staff to implement those decisions; and
- 18 • Providing guidance and reviewing schedules for unit or release facility outages to ensure reliable
19 system operation, ensuring compliance with environmental requirements and minimizing the
20 impact on optimization activities.

21 Energy Marketing is accountable to Hydro to ensure that the security of supply for domestic load for
22 Hydro’s customers remains paramount in all decisions, to ensure the delivery of least-cost, reliable
23 service in an environmentally responsible manner. Energy Marketing’s Water Management and
24 Production Scheduling Group generally makes decisions regarding any mid-week changes to gate
25 settings for water management or fisheries flows independently; however, it is at all times guided by
26 Hydro’s operating instructions and environmental standards. Decisions regarding any mid-week changes
27 to generation at the Holyrood Thermal Generating Station and import/export targets for water

1 management are made by Hydro in consideration of recommendations from the Water Management
2 and Production Scheduling Group.

3 **2.2 External Market Transactions**

4 Energy Marketing transacts in external markets to optimize Hydro's energy supply and capacity
5 requirements. In 2022, this activity was predominantly sales to external markets to reduce the amount
6 of energy that would have been otherwise spilled.

7 Exports to maintain the reservoir levels were carried out according to Water Management and
8 Production Scheduling instructions approved by Hydro.² Exports to avoid and/or reduce spilling are
9 carried out according to direct instructions from Hydro, which include specific hours and quantities.

10 **2.3 Ponding**

11 Throughout 2022, Energy Marketing efficiently managed and executed ponding operations to optimize
12 the storage capability of Island Interconnected System reservoirs. Energy Marketing closely monitored
13 market conditions and system import and export capability to determine the optimum timing and
14 volume for external market transactions. Energy Marketing scheduled these transactions with external
15 markets and counterparties while monitoring the balance and average cost of ponded energy. Energy
16 Marketing bears the risk of any net loss from ponding activity, not Hydro or its customers.

17 **3.0 2022 Benefits**

18 **3.1 Maritime Link Imports Requested by Hydro**

19 There was no import activity through the Maritime Link in 2022.

20 **3.2 Ponding Activities**

21 Through 2022, Energy Marketing exported approximately 19.5 GWh of ponded energy on behalf of
22 Hydro. As reported in Hydro's Quarterly Regulatory Reports, Hydro transferred 15.1 GWh^{3,4} of prior

² The instructions were finalized in the weekly water management meeting.

³ Hydro reported 10 GWh transferred to spill exports in "Quarterly Regulatory Report for the Quarter Ended March 31, 2022," Newfoundland and Labrador Hydro, rev. May 19, 2022 (originally filed May 16, 2022), tab 1, sec. 5.5.

⁴ Hydro reported 5.1 GWh transferred to spill exports in "Quarterly Regulatory Report for the Quarter Ended June 30, 2022," Newfoundland and Labrador Hydro, rev. August 19, 2022 (originally filed August 15, 2022), tab 1, sec. 5.5.

1 ponded exports to spill exports in 2022.⁵ The sales of ponded energy, excluding the 15.1 GWh
2 transferred to spill exports, resulted in a cumulative net profit of \$0.8 million, which was then added to
3 the Hydraulic Resources Optimization Deferral Account in 2022.

4 The ponded energy balance at the end of 2022 was -9.8 GWh.⁶

5 **3.3 Maritime Link Exports for Spill Avoidance**

6 In 2022, Energy Marketing sold power under Hydro's direction to external markets to avoid spills from
7 Island Interconnected System reservoirs. This activity avoided spilled energy, resulting in sales of about
8 25.7 GWh,⁷ including 15.1 GWh transferred from ponding exports (as described in Section 3.2) and
9 provided a net benefit of \$2.3 million to customers, which was reflected in the Hydraulic Resources
10 Optimization Deferral Account in 2022.

11 **3.4 Sale of Recapture Energy**

12 In February 2022, Muskrat Falls and Hydro entered into a short-term agreement for the purchase and
13 sale of Residual Block energy.⁸ Under this agreement, Labrador Rural and Industrial customer load,
14 previously serviced with Recapture Energy from the Churchill Falls Generating Station, is now serviced
15 with energy from the Muskrat Falls Hydroelectric Generating Facility. Entering into this agreement has
16 allowed additional Recapture Energy exports to external markets, helping to ensure maximum value
17 from Hydro's hydrological resources. In 2022, this activity provided a net benefit to customers of
18 \$7.3 million, which was reflected in the Supply Cost Variance Deferral Account.

19 **3.5 Tariff Revenues**

20 Energy Marketing exports energy through the Newfoundland and Labrador Transmission System, which
21 requires the payment of a "point-to-point" transmission tariff to the Newfoundland and Labrador

⁵ Pursuant to the Pilot Agreement for the Optimization of Hydraulic Resources, the ponding balance of -15.1 GWh from prior ponding exports was reallocated as spill exports. Hydrology levels allowed energy sold during favourable market conditions to be replaced with the purchase of lower-cost energy at a later time.

⁶ (Opening Balance 2022) + (2022 Transfer to Spill Exports) – (2022 Exports), (-5.4 GWh) + (15.1 GWh) – (19.5 GWh) = (-9.8 GWh). Export sales remove ponded energy from the cumulative balance and import purchases from the market add ponded energy to the cumulative balance. Transfers of export sales also have a positive impact on the ponded energy balance. The negative balance at the end of 2022 is a reflection of more export sales than import activities during the year along with the transfer of ponded energy sales to spill avoidance, as described herein in Section 3.2 and Section 3.3.

⁷ Includes 15.1 GWh transferred from ponded energy that provided a net benefit of \$1.6 million.

⁸ Hydro reported 10 GWh transferred to spill exports in "Quarterly Regulatory Report for the Quarter Ended March 31, 2022," Newfoundland and Labrador Hydro, rev. May 19, 2022 (originally filed May 16, 2022), tab 1, app. B, p. 9, f.n. 1.

1 System Operator. The amount of additional revenues will be dependent upon the transmission bookings
2 each year.

3 In 2022, this activity provided a net benefit to customers of \$8.9 million,⁹ which was reflected in the
4 Supply Cost Variance Deferral Account.

5 **4.0 Conclusion**

6 Working together, Energy Marketing and Hydro were able to realize financial and reliability benefits for
7 Hydro's customers in 2022 through the optimization of Hydro's assets and the interconnections to
8 Labrador and the North American Grid.

⁹ This balance represents a net benefit of tariff revenue earned and incurred. The total tariff revenue of \$9.4 million is reflected in 'Tariff Revenue' in the Supply Cost Variance Deferral Account, partially offset by tariff costs incurred of \$0.5 million, which is reflected in the price of Hydro's exports under the 'Net Revenue from Exports Variance' in the Supply Cost Variance Deferral Account, included in the "Quarterly Regulatory Report for the Quarter Ended December 31, 2022," Newfoundland and Labrador Hydro, updated July 21, 2022 (originally filed February 15, 2023), tab 1, att. 2.
<<http://pub.nl.ca/indexreports/quarterlyregulatory/From%20NLH%20-%204th%20Quarter%20Report%20for%20period%20ending%20December%2031,%202022%20-%202023-02-15.PDF>>.