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April 7, 2021

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 of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: Restriction on Load Additions on the Labrador Interconnected System – Update

On March 23, 2021, the Board of Commissioners of Public Utilities ("Board") requested that Newfoundland and Labrador Hydro ("Hydro") provide an update as to whether the load restrictions currently in place in Labrador East and West continue to be necessary and appropriate and whether Hydro plans to apply for any changes with respect to Regulation 17.

It is Hydro's position, at this time, that the load restrictions for both Labrador East and Labrador West should remain in place; however, Hydro believes some modification may be appropriate in the future under specific circumstances, as detailed within.

Background

In May 2018, Hydro applied for, and was granted, a temporary restriction on load additions above 100 kW in Labrador East for the 2018–2019 winter season. This request was necessary due to system capacity restrictions and was intended to limit load growth and ensure the provision of reliable service to customers for that time period. In April 2019, Hydro requested that the temporary restriction be extended to allow for completion of the regulatory process relating to the Labrador Network Additions Policy and the Labrador Expansion Study. The Board approved this request in May 2019.

In September 2019, Hydro applied to the Board to extend the restriction to Labrador West. Hydro noted that the baseline forecast for Labrador West contained in the Labrador Expansion Study indicated that demand in Labrador West was likely to exceed the system's 350 MW capacity in 2019. Hydro believed that limiting load growth on the Labrador West system was necessary to enable the provision of reliable service to customers pending completion of the review of the Labrador Network Additions Policy and further order of the Board. At that time, Hydro also requested that the restriction threshold be raised from 100 kW to 200 kW for both Labrador East and West. Hydro's requests were approved in Board Order P.U. 34(2019) on October 29, 2019.

Since that time, the Labrador Network Additions Policy has been approved by the Board, subsequent to the filing of a settlement agreement between Hydro and the Labrador Interconnected Group with respect to the terms of the Policy; the Labrador Network Additions Policy is effective as of April 1, 2021.

Although incremental load requests above the restriction threshold have been denied since the implementation of the load restriction, Hydro has maintained a record of those requests. In order to determine system expansion needs and to identify any new transmission infrastructure necessary to

meet these needs, Hydro is in the process of confirming and formalizing customer requests for incremental load, both from the customers whose applications were denied as well as any customer who had yet to formally apply.¹ As a first step in this determination, customers were asked to submit their interconnection requirements, including technical details that will be needed for system impact studies.² As of March 31, 2021, Hydro had received customer service requests totalling approximately 6,185 MW for Labrador East and 555 MW for Labrador West.³ As the current transmission system capacity in Labrador East is 76 MW in Labrador East and 350 MW in Labrador West, Hydro is reviewing these applications and completing the assessment necessary to determine next steps and inform customers of potential costs.

Labrador East

Although the Labrador Network Additions Policy is now in place, the Muskrat Falls to Happy Valley Interconnection project has not yet come online.⁴ Once it does, the interconnection will provide system transmission capacity of up to 104 MW. Hydro is concerned that without the continuation of a load restriction, the additional system capacity provided by the interconnection could be promptly exhausted by a number of customer requests for large load additions. As noted above, in its process with respect to the Labrador Network Additions Policy, Hydro has received customer requests for Labrador East and West totalling approximately 6,730 MW. Hydro believes that it may be reasonable to adjust the threshold, once the interconnection is in service, to allow for some additional growth in the area while ensuring the system is not overwhelmed to the point that it impacts the delivery of reliable service. If Hydro determines that there is a new threshold that will balance these interests, it will apply to the Board for an adjustment once the in-service date of the interconnection is confirmed.

Labrador West

The existing capacity in Labrador West is 350 MW; however, this is not firm service. In its 2021 Capital Budget Application, Hydro proposed transmission system additions for the Wabush Terminal Station. Hydro explained in its application that the transfer capability of the existing Labrador West transmission system is insufficient to meet both current load requirements and the baseline forecast for existing customers. Without these upgrades, customers in Labrador West are subject to curtailment. Currently, any necessary curtailment is of the power supplied to the existing industrial customer and does not directly impact Hydro's Rural customers. However, this is only due to contractual arrangements between Hydro and the industrial customer, which may be subject to change to ensure the equitable access to an adequate supply of power to all customers. With the proposed capital investments in place, the available firm transmission capability will increase; however, the amount of available capacity will

¹ In addition to reaching out to the Labrador towns, and to parties who had previously expressed interest in service in Labrador, Hydro posted a notice regarding "Requests for Power in Labrador" on its website on March 5, 2021, in which it advised that it is seeking to identify business developers and operators who anticipate a requirement for electrical power service in Labrador. ² To determine expansion requirements, once Hydro confirms and formalizes customer requests, Hydro plans to perform a high level system impact analysis to calculate high level costs associated with providing service to the cumulative requested load and then provide estimated costs for each applicant to proceed with their request for service. Following completion of that preliminary costing and communication process, for those applicants that remain interested in proceeding, Hydro will complete a customer funded system impact study which will determine the necessary system upgrades so that a more accurate estimate of the required upstream capacity charge can be developed for each customer

³ Applications were also received for Central Labrador for approximately 1,145 MW.

⁴ On September 30, 2020, Hydro filed correspondence with the Board indicating that, due to the time frame associated with the in-service of the Muskrat Falls generating units, Hydro was unable to complete the interconnection of the six kilometre transmission line extension ("L1303") and will continue to supply Labrador East using the 138 kV interconnection to Churchill Falls via transmission line L1301/1302. Hydro anticipates completing the interconnection in the late spring/early summer of 2021 when an outage for the interconnection can be accommodated with minimal customer impact and subject to the availability of generation at Muskrat Falls.

only be adequate for the firm supply of existing customers in accordance with baseline load forecasts.⁵ On the basis of the above, modifications to the restriction should not be made at this time. Rather, Hydro will continue to process customer requests for incremental load in western Labrador and will perform analysis to determine the transmission expansion solutions necessary to accommodate them. It is Hydro's expectation that detailed system impact study work will be complete in late 2021.

Conclusion

As noted, Hydro is in the process of determining the system expansion needs for reliable service to customers in Labrador West and Labrador East. Due to limited system capacity, Hydro recommends that existing restrictions remain in place for western Labrador. In eastern Labrador, a modification of restrictions may be requested once the new interconnection is in service.

Hydro continues to work with customers to confirm incremental load requirements and expects that the detailed system impact studies will be complete in late 2021.

As system analyses progress, Hydro will further review the restriction and, where appropriate, update the Board as required.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

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⁵ The baseline load forecast includes existing industrial customers at current capacities and the normal uptick of Hydro Rural retail load at a rate of 200 kW to 600 kW per year. The P90 baseline load forecast is expected to reach 383 MW by the winter of 2045–2046.

Ms. C. Blundon Public Utilities Board

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