NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

AN ORDER OF THE BOARD

NO. P.U. 7(2021)

IN THE MATTER OF the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 (the "*EPCA*") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 (the "*Act*"), as amended, and regulations thereunder; and

IN THE MATTER OF the approval of a Network Additions Policy for the Labrador Interconnected system.

Background

On July 27, 2017 Newfoundland and Labrador Hydro ("Hydro") filed its 2018 Capital Budget Application with the Board of Commissioners of Public Utilities (the "Board"). In Order No. P.U. 43(2017) the Board set out its findings in relation to this application. The Board found that further information was required in relation to the proposed Muskrat Falls to Happy Valley Interconnection Project and deferred consideration of this project. On January 29, 2018 Hydro filed revisions to the documents originally filed in the capital budget application setting out additional information in relation to the Muskrat Falls to Happy Valley Interconnection Project. Following the receipt of this information intervenor submissions were filed, a meeting was held, further requests for information ("RFIs") were answered and submissions were filed by the parties.

On March 23, 2018 the Board issued Order No. P.U. 9(2018) which set out its finding that the Muskrat Falls to Happy Valley Interconnection Project should again be deferred. The Board stated:

> The Board is persuaded by the arguments of the Labrador Interconnected Group, representing the majority of the communities in Labrador East, and IOC that this project should be deferred until further information is provided by Hydro. This information should include:
>
> 1. An expansion study for the Labrador Interconnected system (both Labrador East and Labrador West) for a reasonable planning horizon, which addresses: i) planning criteria, including a discussion of the current reliability concerns and future reliability criteria; ii) base load forecasts and sensitivities; iii) expansion plans to meet the various load forecast scenarios; iv) the condition of existing assets and an estimate of remaining life; v) cost benefit analysis of the alternatives; and vi) estimated projected rate impacts associated with the proposed expansion scenarios.
> 2. A network addition policy setting out how new customers will be treated in regards to their impact on the system and how costs will be allocated among customers for

> reliability, economic, transmission, and load upgrades, either in the cost of service or through contributions in aid of construction.[1]

The Board directed Hydro to file a proposal in relation to the process and timelines for further consideration of the Muskrat Falls to Happy Valley Interconnection Project as well as a plan to ensure the continued provision of reliable service in Labrador East in the short-term. On April 16, 2018 and April 24, 2018 Hydro filed correspondence setting out its plan to ensure the provision of reliable service in Labrador East, which included a plan to develop an approach to limit the amount of load growth related to requests for service connections or upgrades during 2018.

On April 30, 2018 Hydro filed additional information related to the Muskrat Falls to Happy Valley Interconnection Project and committed to filing an expansion study for Labrador East and Labrador West as well as a network additions policy. On May 31, 2018 Hydro filed an application for approval of a new regulation to permit restriction of load additions in Labrador East. The new regulation was approved in Order No. P.U. 36(2018). This regulation was later amended in Order No. P.U 34(2019) to include Labrador West and to increase the threshold for the restriction from 100 kW to 200 kW. The restriction on load additions on the Labrador Interconnected system remains in effect.

On October 31, 2018 Hydro submitted a report, the *Labrador Interconnected System Transmission Expansion Study* (the "Transmission Expansion Plan"). This study recognized the limited available transfer capacity of the Labrador Interconnected system and set out an expansion plan to deliver safe, reliable, least-cost service to customers on the Labrador Interconnected system. A range of load forecasts were addressed with the objective of identifying least-cost, reliable transmission system additions for eastern and western Labrador. Hydro advised that, in advance of submitting this study, it completed consultation sessions with stakeholder groups in the Labrador region.

On December 14, 2018 Hydro filed the *Labrador Interconnected System Network Additions Policy* outlining its proposed new policy for addressing network additions on the Labrador Interconnected system (the "Network Additions Policy"). This policy set out the approach which would be used to determine the contribution requirments from customers on the Labrador Interconnected system related to (i) transmission system extensions to connect new customers or Non-utilty Generators, and (ii) demand requirement requests from customers that may, immediately or over time, contribute to transmission network extensions or upgrades. The policy was also to be used to determine the contributions required from transmission customers requesting open access transmission service.

The Transmission Expansion Plan and the Network Additions Policy were circulated to: Newfoundland Power Inc. ("Newfoundland Power"); the Consumer Advocate, Dennis Browne, Q.C. (the "Consumer Advocate"); a group of Island Industrial customers: Corner Brook Pulp and Paper Limited, NARL Refining LP and Vale Newfoundland and Labrador Limited (the "Industrial Customer Group"); the communities of Sheshatshiu, Happy Valley-Goose Bay, Wabush, and Labrador City ("the Labrador Interconnected Group"); and Iron Ore Company of Canada ("IOC").

[1] Order No. P.U. 9(2018), page 9.

On February 11, 2019 Hydro gave a presention in relation to the Transmission Expansion Plan and the parties were provided the opportunity to ask questions and provide commentary. On February 21, 2019 Newfoundland Power, the Labrador Interconnected Group, IOC and the Board submitted RFIs. Hydro submitted responses to these RFIs by March 20, 2019.

On April 25, 2019 the Labrador Interconnected Group filed a report from Philip Raphals, entitled *Newfoundland and Labrador Hydro's Proposed Network Addition Policy and Transmission Expansion Study*. An addendum report and a supplemental report from Mr. Raphals were filed with the Board on May 6, 2019 and June 21, 2019 respectively.

On July 4, 2019 the Board advised the parties that it had retained The Brattle Group, Inc. ("Brattle") to provide a report in relation to Hydro's network additions policy. On November 21, 2019 Brattle's report, *Review of Existing and Proposed Network Additions Policies for Newfoundland and Labrador Hydro*, was circulated to the parties. On January 6, 2020 Hydro and the Labrador Interconnected Group submitted RFIs on this report. Brattle filed responses to these RFIs on February 6, 2020.

On May 28, 2020 a technical conference was held with Board staff and representatives from Hydro, Newfoundland Power, the Consumer Advocate, the Industrial Customer Group and the Labrador Interconnected Group in attendence.[2] Presentations were provided by Hydro, Brattle and the Labrador Interconnected Group with an opportunity for questions and answers. On June 11, 2020 in follow-up to the technical conference, additional RFIs were filed by the Consumer Advocate, Newfoundland Power, Hydro, the Industrial Customer Group, the Labrador Interconnected Group and the Board. The responses to the RFIs were filed on on June 25, 2020.

Following the technical conference and the filing of the responses to the additional RFIs, Hydro entered into settlement discussions in relation to the Network Additions Policy. Hydro held discussions with the Labrador Interconnected Group in relation to the specific application of the proposed policy to the Labrador Interconnected system. As a result of these discussions a settlement agreement was signed by Hydro and the Labrador Interconnected Group (the "Settlement Agreement"). On December 8, 2020 Hydro filed the Settlement Agreement with the Board and advised that Newfoundland Power, the Consumer Advocate, and the Island Industrial Customer Group had no objection to the agreement and IOC had no comment. Brattle stated that, in its view, the Settlement Agreement is "economically reasonable and in the public interest."[3]

Board Findings

The Settlement Agreement sets out the proposed Network Additions Policy to be utilized by Hydro in determining contribution requirements from customers on the Labrador Interconnected system related to:

(i) transmission system extensions to connect new customers or Non-utility Generators; and

(ii) demand requirement requests from customers that, immediately or over time, may contribute to transmission network extensions or upgrades.

[2] The technical conference was originally scheduled for March 24, 2020 but was postponed in accordance with provincial guidance in relation to COVID-19.

[3] Correspondence from Brattle, January 13, 2021.

The policy would also be used to determine the contributions required from transmission customers requesting open access transmission service. It does not address customer contributions required for distribution extensions or upgrades.

Currently Hydro's practice with respect to transmission network additions is to treat the addition as either common or specifically assigned. Common assets are those that benefit two or more customers, whereas specifically assigned assets are those that benefit only one customer. The costs for specifically assigned assets are attributed to and recovered from the customer to whom the asset is assigned. The costs for common assets are allocated to the customers on the system in accordance with the approved cost of service methodology and are recovered in the rates charged to the customers on the system. This approach does not address circumstances where new transmission investment primarily benefits the new customer and may also have benefits for existing customers.

The stated purpose of the proposed Network Additions Policy is to limit rate increases flowing from investment in new transmission assets required to serve new load requests and to achieve a reasonable balance in the sharing of the benefits and the costs between new and existing customers.[4] This policy sets out that customer contributions would include Upstream Capacity Charges based on the Transmission Expansion Plan with the peak demand for the applicant being the key determinant of the cost assignment. A Basic Capacity Investment Credit would be applied for all applicants for permanent service on the first 200 kW and cost assignment would be determined as follows:

- For peak loads of up to 200 kW there would be no Upstream Capacity Charges for applicants as a result of the Basic Capacity Investment Credit.
- For peak loads of 200 kW to 1500 kW costs would be based on the applicant's projected increased peak demand valued at the established expansion cost per kW, less the Basic Capacity Investment Credit.[5]
- For peak loads greater than 1500 kW if the request would not require acceleration of the Transmission Expansion Plan the Upstream Capacity Charges would be calculated in the same way as it is for peak loads of 200 kW to 1500 kW. If acceleration of the Transmission Explansion Plan would be required Upstream Capacity Charges would be calculated based on the Expansion Advancement Cost less the Basic Capacity Investment Credit and any Demand Revenue Credit and Betterment Credit.[6] A Betterment Credit would be applied if the improvement would benefit both the applicant and existing customers; for example, where the addition would result in life extension for common transmission assets and provide benefits to existing customers. A Demand Revenue Credit would be applied to reflect the additional future revenues from an applicant which would be expected to partially offset the cost incurred to serve the applicant's peak demand requirements.[7] The Demand Revenue Credit may be applied where the applicant is requesting a permanent service that has a reasonable

[4] Settlement Agreement, Schedule A, page 2 of 23.
[5] The Network Additions Policy, Appendix A, Table 1 sets out the expansion cost as $465 per kW.
[6] The Expansion Advancement Cost would be determined in accordance with Appendix B of the Network Additions Policy. The cost of the acceleration would be reduced to reflect Upstream Capacity Charge payments previously provided to Hydro for applicable transmission facilities.
[7] The Network Additions Policy, Appendix A, Table 1 sets out the demand revenue credit of $250 per kW.

expectation of service life of at least 25 years and a reduced credit may be applied for expected service lives of less than 25 years.

The proposed Network Additions Policy also sets out the following:

- Deviations from the policy may be permitted for projects that meet a defined public service need in the community, for example emergency services, medical clinics, daycare centers, grocery stores, gas stations.
- Additional charges for sustaining capital for specifically assigned assets.
- Multiple applications for service may be treated as a single application.
- Hydro may request a security deposit where there is uncertainty associated with the duration of service.
- Hydro shall apply for Board approval of deviations from the policy, customer contributions for specifically assigned assets, and upstream capacity charges calculated to be greater than $200,000.

The Settlement Agreement sets out that the parties agree that Hydro will file a report in mid-2023 which provides a review of the Network Additions Policy up to that point along with recommendations regarding any necessary steps to implement a "But For" approach by January 1, 2024. Under the "But For" approach applicants would be assigned costs for investments that "but for" the customer's request would not have been required and for which the requesting customer is causally responsible. Hydro also agreed as part of the Settlement Agreement to conduct a review of the feasibility of including a Non-Firm Rate option to the Network Additions Policy and file a report with the Board by mid-2021.

The Board believes that the Settlement Agreement and the proposed Network Additions Policy offer a reasonable approach to determine customer contribution requirements related to transmission system extensions and demand requirement requests on the Labrador Interconnected system as well as requests for open access transmission service. The Network Additions Policy recognizes that there are occasions where new transmission investment may primarily benefit the applicant but may also benefit other customers. The Network Additions Policy provides a fair approach to the recovery of costs for transmission investments required to connect new customers and serve increased customer load requirements on the Labrador Interconnected system. Hydro and the Labrador Interconnected Group agree on the proposed policy and there are no objections to this agreement or the proposed policy. In addition Brattle has stated that in its view the Network Additions Policy is economically reasonable and in the public interest.

The Board accepts the Settlement Agreement and the Network Additions Policy as representing a reasonable balance of the interests of all customers in determinations related to customer contribution requirements for transmission system extensions and demand requirement requests on the Labrador Interconnected system. The Settlement Agreement is accepted and the proposed Network Additions Policy for the Labrador Interconnected system will be approved.

IT IS THEREFORE ORDERED THAT:

1. The Network Additions Policy for the Labrador Interconnected system, as set out in Schedule A to this Order, is approved effective April 1, 2021.

2. Hydro shall file a report on or before July 1, 2021 with respect to the feasibility of the addition of a Non-Firm Rate option to the Network Additions Policy.

3. Hydro shall file a report on or before July 1, 2023 setting out recommendations with respect to the transition to the "But For" approach as of January 1, 2024.

4. Hydro shall pay all expenses of the Board arising from this Application.

DATED at St. John's, Newfoundland and Labrador, this 17th day of March, 2021.

Darlene Whalen, P. Eng., FEC
Chair and Chief Executive Officer

Dwanda Newman, LL.B.
Vice-Chair

Cheryl Blundon
Board Secretary

NEWFOUNDLAND AND LABRADOR HYDRO
NETWORK ADDITIONS POLICY – LABRADOR INTERCONNECTED SYSTEM

1. THE POLICY: GENERAL

The purpose of this Network Additions Policy ("Policy") is to limit rate increases that can result from investment in new transmission assets to serve new load requests, and to achieve a reasonable balance in the sharing of the benefits and the costs of new transmission investments between the Applicant and existing Customers.

This Policy will be used to determine the contribution requirements from Applicants on the Labrador Interconnected System related to (i) transmission system extensions to connect Applicants or Non-utility Generators; and (ii) demand requirement requests from Applicants that, immediately or over time, may contribute to transmission network extensions or upgrades. The Policy will also be used to determine the Customer Contributions required from Transmission Customers requesting open access transmission service.

This Policy does not address Customer Contributions required for distribution extensions or upgrades.[1]

2. DEFINITIONS

Applicant means any person who applies for Service. An Applicant can be an existing Customer. Multiple applications for Service may be treated as a single Application for the purposes of this Policy, including those submitted by related corporate entities.

Basic Capacity Investment is the amount of capacity investment in Common Assets provided for Permanent Service to Applicants from which an Applicant requesting Service is excused payment. The Basic Capacity Investment is 200 kW.

Basic Capacity Investment Credit equals the Basic Capacity Investment multiplied by the Expansion Cost per kilowatt ("kW").

Betterment means a substantial improvement of existing structures, facilities or equipment. Betterment includes the replacement or improvement of parts which has the effect of extending the useful life of the property, increasing its capacity, lowering its operating cost, or otherwise adding to its worth through the benefit it can yield.

Betterment Credit: The calculation of the Betterment Credit is based on the depreciation assumptions reflected in the determination of the Test Year revenue requirement. In

[1] General Service Customer contributions for distribution extensions or upgrades are determined based on the Contribution in Aid of Construction Policy: Distribution Line Extensions and Upgrades to General Service Customers, as approved by the Board.

calculating the Betterment Credit, the survivor curves used in the establishment of the approved depreciation rates will be utilized.

Board means the Board of Commissioners of Public Utilities for Newfoundland and Labrador.

Capacity means the capability to provide energy, measured and expressed in kW.

Common Assets means transmission assets that provide benefit to two or more Customers.

Customer means any person who accepts or agrees to accept Service.

Customer Contribution means the payment required from the Applicant/Customer requesting Service.

Demand means the quantity of electricity delivered. It is expressed in kW or kilovolt amperes ("kVA"), either at a given point in time or averaged over a period of time.

Demand Revenue Credit equals the Demand Revenue Credit per kW multiplied by the net of the Applicant's additional Peak Demand requirement less the Basic Capacity Investment. The full Demand Revenue Credit is provided to an Applicant that has a reasonable expectation of service life of at least 25 years and is requesting Permanent Service and required to pay an Upstream Capacity Charge as a result of requesting additional Peak Demand of 1500 kW or greater. The purpose of the Demand Revenue Credit is to reflect that additional future revenues from the Applicant are expected to partially offset the cost incurred to serve the Applicant's Peak Demand requirements. The amount of Demand Revenue Credit provided will be reduced for Applicants with an estimated service life of less than 25 years.

Demand Revenue Credit per kW means a per kW credit based on the present value of the forecast recovery of transmission demand-related costs through the electricity charges to be paid by the Applicant.

EPCA means the *Electrical Power Control Act, 1994* SNL 1994, Chapter E-5.1.

Expansion Advancement Cost means the cost of acceleration of the Transmission Expansion Plan.

Expansion Cost per kW means an estimate of the cost of potential transmission upgrades, as provided in the Transmission Expansion Plan, divided by the additional capacity provided by those transmission upgrades. Hydro will update the Expansion Cost per kW within three months of filing a new Transmission Expansion Plan with the Board.

General Service Customer means a Customer eligible for Permanent Service or Temporary Service pursuant to any Rate #'s 2.1L, 2.2L, 2.3L or 2.4L of Hydro's Schedule of Rates, Rules and Regulations.

Hydro means Newfoundland and Labrador Hydro.

NLSO means the Newfoundland and Labrador System Operator.

Non-utility Generator is an entity which is not a public utility but which owns facilities to generate electric power for sale.

Peak Demand means the maximum demand in kW required to serve a Customer.

Permanent Service means electrical service required for at least three years.

Proportionate Sharing Approach is the reflection of the Peak Demand requirements for each Applicant in the allocation of the aggregate Upstream Capacity Charge for multiple Applicants.

Schedule of Rates, Rules and Regulations means the schedule setting out the rates, rules and regulations relating to Hydro's service, as approved from time to time by the Board.

Service means any service provided by Hydro pursuant to the Schedule of Rates, Rules and Regulations.

Specifically Assigned Assets means transmission assets that provide benefits to only one Customer. Specifically Assigned Assets also include Hydro's transmission assets required to interconnect the assets of a Non-utility Generator.

Sustaining Capital means incremental capital investment in transmission assets so that the transmission assets can continue to provide the capacity and functionality originally intended. Sustaining Capital includes the cost of replacement at the end of the asset life.

System Impact Study means an assessment conducted by Hydro regarding the adequacy of the transmission system to accommodate an interconnection or load addition request from an Applicant or a Non-utility Generator and the costs and benefits associated with transmission upgrades or additions to comply with the Service request.

System Impact Study Charge refers to all costs and expenses incurred, directly or indirectly, by or on behalf of Hydro in conducting the System Impact Study. Payment of costs and expenses shall include a security deposit as specified in an agreement between the Applicant and Hydro that details the System Impact Study scope, cost, schedule, and other contractual clauses as appropriate. The security deposit shall be payable prior to the commencement of the System Impact Study. The remaining portion of the System Impact Study Charge will be due upon the completion of the System Impact Study.

Temporary Connection Fee is calculated as the estimated labour cost of installing and removing lines and equipment necessary to provide the Service plus the estimated cost of non-salvageable material (i.e., consistent with the Schedule of Rates, Rules and Regulations).

Temporary Service means a service that is required for a period of less than three years. Applicants requiring Temporary Service will be required to pay a Temporary Connection Fee.

Transmission Customer means a Customer that will receive service under the NLSO open access transmission tariff.

Transmission Expansion Plan refers to the most recent transmission system expansion plan for the Labrador Interconnected System filed with the Board. The Transmission Expansion Plan identifies Transmission Upgrades required to serve various load growth scenarios and the estimated costs to implement each upgrade.

Transmission Upgrade means capital projects undertaken to meet transmission system requirements, for example, to increase capacity, to improve reliability, to meet load growth, to meet generation interconnection and service requests, or to provide congestion relief.

Transmission Voltage means 46 kV or higher.

Upstream Capacity Charge means the contribution required from an Applicant requesting an increase in access to Capacity on Common Assets. The Upstream Capacity Charge cannot be less than zero.

Upstream Capacity Cost means the Expansion Cost per kW multiplied by the Applicant's Peak Demand increase as a result of their new/additional service request.

3. POINT OF DELIVERY

Hydro shall determine the point at which power and energy is delivered to the Customer's electrical system from Hydro's facilities.

4. CUSTOMER CONTRIBUTION FOR SPECIFICALLY ASSIGNED ASSETS

The Customer Contribution will equal the amount necessary to fully recover the initial capital investment from the Customer to whom the assets are specifically assigned. An additional Customer Contribution will apply to recover all Sustaining Capital for the Specifically Assigned Asset, as required.

Hydro will also recover the estimated annual operating and maintenance costs from the Customer through either a specifically assigned charge or payment to Hydro in accordance with a contractual arrangement.

Hydro will monitor new connections to Specifically Assigned transmission assets for a period of ten years. If other Customers come to be served by the Specifically Assigned Assets, Hydro will charge a Customer Contribution to the new Customer and reduce appropriately the original Customer Contribution through a refund.

5. UPSTREAM CAPACITY CHARGE TO SUPPLY DEMAND REQUESTS

This section will apply to determine the required Upstream Capacity Charge to supply peak demand requests[2] of greater than 200 kW from an Applicant.[3]

5.1 Applicant Peak Demand Requests of less than 1500 kW

For Applicant Demand requests of less than 1500 kW, the Upstream Capacity Charge is calculated to equal the Upstream Capacity Cost less the Basic Capacity Investment Credit.

The Upstream Capacity Cost is computed based on the Applicant's projected increased Peak Demand valued at the Expansion Cost per kW. The Expansion Cost per kW is provided in Table 1 of Appendix A. The Upstream Capacity Charge is a one-time charge for both Temporary Service and Permanent Service to be paid in advance of Hydro providing the Service.

5.2 Applicant Peak Demand Requests of 1500 kW or greater

Upon receipt of an Applicant's Demand request of 1500 kW or greater, Hydro will conduct a preliminary assessment to determine if compliance with the request would require acceleration of the Transmission Expansion Plan.

If Hydro concludes there is no acceleration of the Transmission Expansion Plan from complying with the Applicant request, the Upstream Capacity Charge will generally be computed using the same approach as described in Section 5.1. Where applicable, the Demand Revenue Credit will be applied in addition to the Basic Capacity Investment Credit in computing the Upstream Capacity Charge. (The Demand Revenue Credit is detailed further in Section 5.3).

If the potential exists for a material impact on the Transmission Expansion Plan, Hydro will conduct a System Impact Study to determine the technical requirements for interconnection or system upgrades and identify cost implications. The Applicant requesting Service will be required to pay Hydro the System Impact Study Charge.

[2] As stated in Section 2 Definitions, applications for multiple Services may be treated as a single Application.
[3] Applicants that are required to pay Customer Contributions for other Services (e.g., provision of Specifically Assigned Assets, distribution extensions or distribution upgrades, or a Temporary Service Fee) are also subject to the determination of the Upstream Capacity Charge computed in accordance with this Policy.

If acceleration of the Transmission Expansion Plan is required, Hydro will determine the Expansion Advancement Cost. The procedures used to determine the Expansion Advancement Cost are provided in Appendix B to this Policy.

A Betterment Credit will be applied if the Transmission Upgrade reflected in the calculation of the Upstream Capacity Charge will result in a life extension for common transmission assets and provide benefits to existing customers.

The Upstream Capacity Charge will then be computed as the Expansion Advancement Cost less the Basic Capacity Investment Credit and, when applicable, less the Demand Revenue Credit and/or the Betterment Credit.

5.3 Demand Revenue Credit

The Demand Revenue Credit is provided to Applicants with Peak Demand requests of 1500 kW or greater to reflect that future revenues resulting from providing the new or additional service will partially offset the transmission cost incurred to serve the Applicant's Peak Demand requirements, thereby limiting the requirement for future rate increases for existing customers resulting from capital investments.

The Demand Revenue Credit per kW is provided in Table 1 of Appendix A. Hydro will update the Demand Revenue Credit per kW at the same time as it updates the Expansion Cost per kW.

The Demand Revenue Credit per kW will be reduced by 3.0% for each year that the estimated life of the Applicant's operations is less than 25 years. This reduction reflects a reduced current value in the demand revenues to be provided by the Applicant with a Service life projection of less than 25 years.

Where there is a level of uncertainty associated with duration of service for an Applicant, Hydro may require a security deposit in advance of connecting the Applicant. The maximum amount of the security deposit required from the Applicant will be the Demand Revenue Credit reflected in the calculation of the Upstream Capacity Charge and the minimum amount will be the security deposit required under Hydro's Security Deposit Policy (i.e. average of two months billings reflecting the additional load)Any refund of the security deposit will be subject to (i) the Customer meeting the payment terms as required in Hydro's Schedule of Rates, Rules and Regulations; and (ii) the revenues provided by the Customer equaling or exceeding the forecast amounts used in computing the Demand Revenue Credit provided to the Customer. Interest on the security deposits will be determined in accordance with Hydro's Security Deposit Policy.

5.4 Multiple Concurrent Requests

In cases where new or increased Demand requirements have been requested concurrently by more than one Applicant that amount to 1500 kW or greater, the aggregate Upstream

Capacity Charge shall be allocated among the Applicants based on a Proportionate Sharing Approach. In this circumstance, the Basic Capacity Investment Credit provided and the Demand Revenue Credit provided, if applicable, will reflect the number of Applicants used when computing the aggregate Upstream Capacity Charge.

5.5 Transmission Customer Requests

Hydro will conduct a System Impact Study to determine if an acceleration of its Transmission Expansion Plan is necessary to permit the NLSO to provide a requested service to a Transmission Customer. The Transmission Customer Applicant requesting service will be required to pay the System Impact Study Charge.

Any required contribution from a Transmission Customer Applicant is based on the calculation of the Expansion Advancement Cost. Transmission Customer Applicants requesting Service are not eligible for a Basic Capacity Investment Credit or the Demand Revenue Credit.

5.6 Common Asset Replacement and the End of Life

Applicants that pay an Upstream Capacity Charge are not required to pay a Customer Contribution for the replacement of those Common Assets at the end of the asset life.

6. REVIEW OF UPSTREAM CAPACITY CHARGES

6.1 Accuracy of Peak Demand Forecast

Hydro will conduct a 2-year review of the reasonableness of the forecast Peak Demand used in computing Upstream Capacity Charges. If the Customer's actual Peak Demand exceeds the forecast Peak Demand used in computing the Upstream Capacity Charge by greater than 10%, the Upstream Capacity Charge will be recalculated and will result in an additional charge to the Customer that paid the Upstream Capacity Charge.

6.2 Refund Reviews

In cases where the Upstream Capacity Charge paid by a Customer was computed using the Expansion Advancement Cost approach and resulted in a Transmission Upgrade providing a system Capacity addition exceeding the Customer's Peak Demand requirement by greater than 10%, the Upstream Capacity Charge will be reviewed to determine if a refund to the initial Applicant is appropriate as a result of the subsequent payment of Upstream Capacity Charges by new Customers.

These refunds will be based on the amount of additional Upstream Capacity Charges facilitated by the Capacity made available by the initial Customer. The refund review will be conducted annually and the eligible refund period is ten years from the date the Service

is provided to the initial Customer. No customer will pay less than the Upstream Capacity Cost net of the Basic Capacity Investment Credit.

7. PROVISION OF SPECIAL FACILITIES OR ASSET RELOCATIONS

Where special facilities are required or requested by the Applicant or any facility is relocated at the request of the Applicant, the Applicant shall pay Hydro in advance the estimated additional cost of providing the special facilities and the estimated cost of the relocation less any betterment.

8. BOARD APPROVALS

Hydro shall apply to the Board for approval of:

(i) all Customer Contributions for Specifically Assigned Assets;
(ii) all Upstream Capacity Charges that are calculated as greater than $200,000; and
(iii) any deviations from this Policy in the calculation of Customer Contributions or Upstream Capacity Charges. Deviations from the Policy will be considered for projects that meet a defined public service need, such as emergency services (fire departments, hospitals, etc.); or the provision of necessary services (medical clinics, daycare centers, grocery stores, gas stations, etc.).

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Appendix A
Computation Factors

Table 1 provides the Expansion Cost per kW and the Load Based Investment per kW applicable to the calculation of Upstream Capacity Charges. These factors will be updated as necessary with approval of the Board.

Table 1 **Network Addition Policy – Computation Factors**	
Expansion cost per kW	$465
Demand Revenue Credit per kW	$250

Appendix B
Determining Expansion Advancement Cost

Table of Contents

1.0 Introduction

If acceleration of the Transmission Expansion Plan for the Labrador Interconnected System ("LIS") is required to comply with a request for Service from an Applicant, Hydro will determine the Expansion Advancement Cost. This cost reflects the cost of acceleration of the Transmission Expansion Plan. This document provides the methodology used to determine the Expansion Advancement Cost.

Figure 1 illustrates Hydro's Network Additions Policy process.

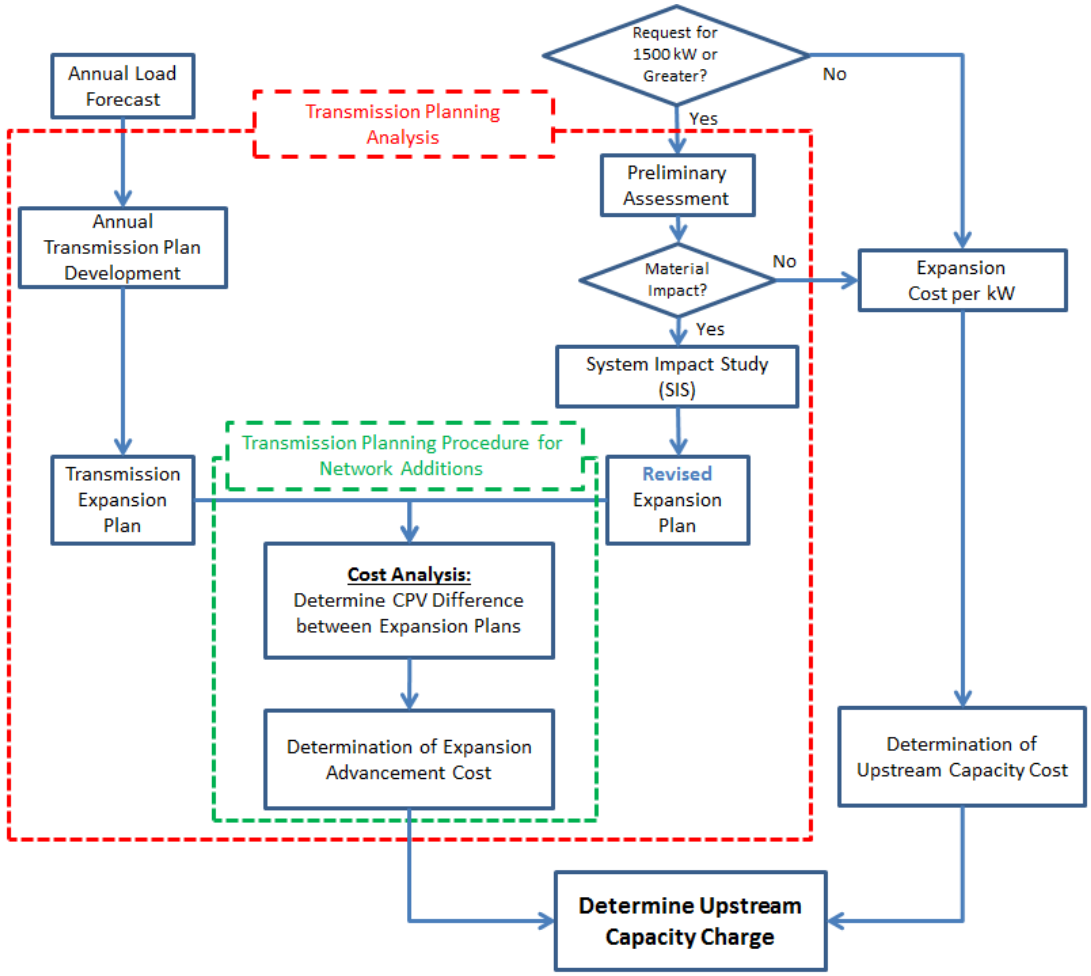

Figure 1 - Network Additions Process

1.1 Transmission Plan Development

Hydro performs an annual assessment of the previous Transmission Expansion Plan for the LIS based on its current demand forecast. This assessment allows for the determination of the timing of transmission system additions and modifications necessary to ensure safe, reliable, and economical long-term operation. On this basis, a new Transmission Expansion Plan is developed.

Hydro filed its initial Transmission Expansion Plan for the LIS on October 31, 2018.

1.2 System Impact Study

When Hydro receives an interconnection or load addition request from a Customer in excess of 1500 kW[1], a preliminary assessment of the potential impact is undertaken to determine if compliance with the request would require acceleration of the Transmission Expansion Plan.

If there is potential for a material impact on the Transmission Expansion Plan, Hydro will conduct a System Impact Study to determine the technical requirements for interconnection or system upgrades and identify cost and benefit implications.[2] The Applicant is responsible for the costs of the System Impact Study.

If Hydro concludes there is no acceleration of the Transmission Expansion Plan from complying with the Applicant's request, the Upstream Capacity Charge will be computed as described in Section 5.1 of the Network Additions Policy. If acceleration of the Transmission Expansion Plan is required, Hydro will determine the Expansion Advancement Cost.

If a Transmission Upgrade not reflected in the Transmission Expansion Plan becomes required within five (5) years due to an Applicant's service request, the cost of acceleration to meet the Applicant's request will be deemed to be equal to the full project cost. When appropriate, the cost of acceleration will be reduced to reflect Upstream Capacity Charge payments previously provided to Hydro for applicable transmission facilities. However, in no circumstance will the Upstream Capacity Charge for an Applicant be less than the Upstream Capacity Cost net of the Basic Capacity Investment Credit, as calculated in accordance with Section 5.1 of the Network Additions Policy.

2. Network Additions Analysis

This section provides a description of the process for calculating the Expansion Advancement Cost based on the cumulative present value ("CPV") impact associated with the acceleration of the Transmission Expansion Plan. The costs associated with each new large service request are examined over a 10-year study period and are evaluated in terms of CPV.

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[1] The request may be for a new customer or for increased demand from an existing customer. Large requests may also include the conversion of temporary or curtailable loads to permanent of firm loads.

[2] A customer interconnection or load addition is deemed to have a material impact if it requires an advancement of transmission system expansion, as defined in the Transmission Expansion Plan, or requires additional transmission system expansion which is not yet reflected in the Transmission Expansion Plan.

2.1 Inputs

The following inputs are required for the analysis:

- Hydro's Transmission Expansion Plan, including capital costs, asset replacement schedules and operating costs;
- A revised peak demand forecast reflecting the Customer's request;
- Details of the acceleration of the Transmission Expansion Plan,[3] including capital costs, asset replacement schedules, and operating costs;
- Escalation and discount rates in accordance with corporate assumptions; and
- Fuel price forecasts in accordance with corporate assumptions.

2.2 Procedure

The Network Additions analysis includes the following considerations:[4]

- Capital Project Costs;
- Operating and Maintenance ("O&M") Costs;
- Reliability Assessment; and
- Betterment Credit Evaluation.

2.2.1 Capital Project Costs

Acceleration of the Transmission Expansion Plan will impact capital expenditures. Revised costs and timing are determined as part of the System Impact Study. The CPV for both the Transmission Expansion Plan and the accelerated Transmission Expansion Plan are determined using appropriate escalation indices and discount rates, permitting the calculation of the CPV difference between the two plans.

2.2.2 O&M Costs

Acceleration of the Transmission Expansion Plan also produces O&M cost impacts. These impacts can relate to equipment or to operating costs associated with peak shaving or backup generation, as appropriate.[5] Additionally, there may be an advancement of asset retirements where costs associated with the removal and/or decommissioning of existing equipment are incurred.[6] As is the case for capital costs, the CPV for O&M costs is determined for both the Transmission Expansion Plan and the accelerated plan using appropriate escalation indices and discount rates. The CPV difference for O&M costs is calculated accordingly.

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[3] As per the results of the System Impact Study.

[4] Transmission losses are not considered in the Network Additions analysis. Rather, losses are a technical and economic design consideration in the System Impact Study. Losses are a factor in the determination of the least-cost technically viable solution and associated costs/benefits would be shared by all customers.

[5] In Labrador, this may include operation of the Happy Valley Gas Turbine or other generation as required.

[6] It is assumed that if an asset with remaining net book value is removed from service, it will be returned to inventory. Special consideration will be given to cost allocation in cases where it is not practical to return all assets to inventory.

2.2.3 Reliability Assessment

The addition of a new large load and the resulting acceleration of increased transmission capacity has the potential to influence technical characteristics of the transmission system such as equipment ratings, voltage levels, and transient stability. Analysis may be performed to determine how relevant parameters affect the capacity of the LIS transmission system and thereby affect reliability. A System Impact Study therefore includes an assessment of the reliability impacts for existing customers.

Adverse reliability impacts associated with the interconnection of new customers will be addressed as part of the System Impact Study. Required transmission system upgrades will be identified and reflected in the Expansion Advancement Cost to ensure acceptable reliability for all customers.

2.2.4 Betterment Credit Evaluation

A Betterment Credit will apply to reduce the Upstream Capacity Charge if a Transmission Upgrade required to provide service to the Applicant results in substantial improvement of existing structures, facilities or equipment to the benefit of existing customers. The calculation of the Betterment Credit is based on the depreciation assumptions reflected in the determination of the Test Year revenue requirement. In calculating the Betterment Credit, the survivor curves used in the establishment of the approved depreciation rates will be utilized.

2.3 Results

The results of the Network Additions analysis enable the calculation of the Expansion Advancement Cost based on a comparison of the CPV for all costs resulting from the acceleration of the Transmission Expansion Plan. The items reflected in the analysis include:

- Capital Costs; and
- Operating and Maintenance Costs.

As detailed previously, the Expansion Advancement Cost will be adjusted, as required, to reflect (i) prior payments of Upstream Capacity Charges to Hydro for appliable transmission assets; and (ii) any Betterment Credit resulting from the Transmission Upgrade.