Newfoundland and Labrador Hydro
Hydro Place. 500 Columbus Drive
P.O. Box 12400. St. John's. NL
Canada A1B 4K7
t. 709.737.1400 I f. 709.737.1800
nlhydro.com

January 31, 2022

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: Long-Term Supply for Southern Labrador – Phase 1 – Stakeholder Consultations – Further Update

Please find enclosed Newfoundland and Labrador Hydro's ("Hydro") "Long-Term Supply for Southern Labrador Stakeholder Engagement Summary Report."

Hydro's request for a cessation in review schedule for the "Long-Term Supply for Southern Labrador – Phase 1" application ("Application") was in response to the concerns raised by various stakeholders regarding the Application and whether Hydro had considered all options. Hydro requested the pause to allow for continued stakeholder engagement and consultation to ensure the greatest possible alignment and understanding among all parties. As noted in Hydro's enclosed report, Hydro has taken the time through December 2021 and January 2022 to listen to concerns raised by stakeholders in southern Labrador. Hydro's consultation with the parties was carried out to better understand their issues and ensure that all viable options have been considered, as well as to share information and offer the opportunity for the southern Labrador communities' input into Hydro's next steps.

Hydro has heard from the parties, and has considered their positions and suggestions; however, based on the available information and the analysis, the southern Labrador interconnection remains the most economically viable, least-cost option for supplying the communities with reliable power. Hydro requests that the Board of Commissioners of Public Utilities resume the review schedule for the Application to allow the consideration of Hydro's Application to continue.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

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

Encl.

ecc:

Board of Commissioners of Public Utilities
Jacqui H. Glynn
PUB Official Email

Consumer Advocate
Dennis M. Browne, QC, Browne Fitzgerald Morgan & Avis
Stephen F. Fitzgerald, Browne Fitzgerald Morgan & Avis
Sarah G. Fitzgerald, Browne Fitzgerald Morgan & Avis
Bernice Bailey, Browne Fitzgerald Morgan & Avis
Bernard M. Coffey, QC

Labrador Interconnected Group
Senwung F. Luk, Olthuis Kleer Townshend LLP
Julia K.G. Brown, Olthuis Kleer Townshend LLP

Newfoundland Power Inc.
Dominic J. Foley
Lindsay S.A. Hollett
Regulatory Email

Industrial Customer Group
Paul L. Coxworthy, Stewart McKelvey
Denis J. Fleming, Cox & Palmer
Dean A. Porter, Poole Althouse

Long-Term Supply for Southern Labrador – Phase 1

Stakeholder Engagement Summary Report

January 31, 2022

A report to the Board of Commissioners of Public Utilities

Contents

List of Attachments

1.0 Introduction

In the spring of 2021, Newfoundland and Labrador Hydro ("Hydro") engaged with town council members and other representatives from the Southern Labrador Communities[1] who would be interested in Hydro's approach to providing long-term supply for these communities. The objective was to provide background information on the project, the proposed alternatives, and the utility imperatives (reliability, safety, and least cost) Hydro is required to use in weighing the various options.

In the fall of 2021, Hydro and the Board of Commissioners of Public Utilities ("Board") received letters from several parties raising concerns regarding Hydro's proposed alternative to build a micro grid in Port Hope Simpson to serve the Southern Labrador Communities. It was clear that many questions and concerns remained and that Hydro needed to better address those concerns.

On November 10, 2021,[2] Hydro requested a pause in the review schedule of its Long-Term Supply for Southern Labrador – Phase 1 application ("Application")[3] to allow for additional stakeholder engagement and consultation to ensure idea exchange and the greatest possible alignment and understanding amongst all parties. In correspondence dated November 16, 2021, the Board agreed with Hydro's request and that the suspension of the schedule should ". . . allow Hydro to further engage with those that have provided comments to the Board as well as to ensure that all parties that may have an interest in this project have been notified and consulted."[4]

On December 13, 2021,[5] Hydro assured the Board that it would carry out additional consultations to:

- Address specific concerns raised in written correspondence;
- Engage in open dialogue regarding the options for long-term supply in southern Labrador and potential impacts and benefits of Hydro's proposed approach; and
- Gather any additional feedback and input from these stakeholders.

[1] The "Southern Labrador Communities" are made up of five neighbouring communities in southern Labrador that include Charlottetown, Pinsent's Arm, Mary's Harbour, Port Hope Simpson, and St. Lewis.
[2] "Long-Term Supply for Southern Labrador – Phase 1," Newfoundland and Labrador Hydro, November 10, 2021.
[3] "Long-Term Supply for Southern Labrador – Phase 1," Newfoundland and Labrador Hydro, July 16, 2021.
[4] "Newfoundland and Labrador Hydro - 2021 Capital Budget Supplemental Application Approval of the Construction of Phase 1 of Hydro's Long-term Supply Plan for Southern Labrador – Review Schedule Suspended," Board of Commissioners of Public Utilities, November 16, 2021, at p. 1.
[5] "Long-Term Supply Plan for Southern Labrador – Phase 1 – Status Update Regarding the Suspension of the Review Schedule," Newfoundland and Labrador Hydro, December 13, 2021.

Hydro committed to filing an update on the stakeholder consultation process no later than January 31, 2022 in an effort to minimize the impact to the project schedule, as the residents of Charlottetown are reliant on mobile gensets until a long-term solution is confirmed.

2.0 Stakeholder and Community Engagement Approach

During it's sessions, Hydro acknowledged that it could have done a better job sharing information related to the southern Labrador supply options with stakeholders, recognizing that the regulatory process is not well understood in the general community. Hydro's President and CEO, Jennifer Williams, emphasized to stakeholders that it is paramount to the company that the Southern Labrador Communities fully understood the alternatives assessed and that all parties have the opportunity to raise concerns and have them addressed. Hydro committed to provide an update regarding any resumption of schedule, via email, to all parties who were consulted once an updated regulatory process schedule was developed and communicated.

2.1 Consultation Objectives and Approach

Hydro understands the concerns raised by the Southern Labrador Communities and that additional opportunities were needed to allow representatives to raise concerns, seek answers, and to gain feedback and input. To that end, Hydro set consultation objectives and communicated them at the outset of each stakeholder session to ensure meaningful dialogue and information exchange.

2.1.1 Objectives

- To better explain southern Labrador electricity supply alternatives and build a greater understanding of the advantages and disadvantages of each alternative;
- To enable further discussion regarding Hydro's proposed southern Labrador regional interconnection project including discussion of the following alternatives for the future supply of reliable power for the south coast of Labrador:
  - High voltage transmission interconnection to the Labrador Interconnected System (400 km line);
  - Continued isolated systems with limited potential for integration of renewables; and
  - Regional interconnection with maximum potential for the integration of community-based renewables;

- To continue meaningful discussion and idea exchange with interested parties regarding long-term supply to the region; and
- To gain alignment that the approach, which meets Hydro's obligation of providing electricity at the "lowest possible cost consistent with reliable service," also supports the longer-term interests of the Southern Labrador Communities.

2.1.2 Approach

Understanding the importance of this project to the Southern Labrador Communities, Hydro's President and CEO, Jennifer Williams, along with Hydro's Vice-President, Engineering and Newfoundland and Labrador System Operator, Rob Collett, led the virtual presentations and meetings with elected officials and town employees on behalf of Hydro. In attendance, for support, were members of Hydro's Public Affairs and Commercial teams. Hydro also invited Executive from the Government of Newfoundland and Labrador's Department of Labrador Affairs to ensure that the department was engaged and aware of the information shared and to support engaging other parties when necessary.

Table 1: Stakeholder Sessions

Meeting	Date
NunatuKavut Community Council ("NCC") and Nunacor	December 1, 2021
Honourable Lisa Dempster, Minister Responsible for Indigenous Affairs and Reconciliation and Minister Responsible for Labrador Affairs	December 3, 2021
Town of Port Hope Simpson	January 10, 2022
Town of Charlottetown	January 12, 2022
Combined Councils of Labrador	January 18, 2022
Town of St. Lewis	January 19, 2022
Town of Mary's Harbour	January 20, 2022
Honourable Yvonne Jones, Member of Parliament, Parliamentary Secretary to the Minister of Natural Resources and to the Minister of Northern Affairs	January 24, 2022

Table 2: Information Gathering Meetings

Meeting	Date
Natural Resources Canada	December 3, 2021
Crown-Indigenous Relations and Northern Affairs Canada	December 3, 2021
Canada Infrastructure Bank	December 3 and 7, 2021
Industry Canada	December 3, 2021

3.0 Feedback from Consultation Sessions

The themes of issues raised by southern Labrador stakeholders through correspondence submitted to the Board and Hydro, as well as through the consultation sessions, are provided herein. A detailed summary of the feedback received relating to each issue is outlined in Section 4.0, along with Hydro's analysis related to each of these issues.

- Opposition to the southern diesel micro grid due to a preference to implement large-scale interconnection with renewable, clean energy supply from the Upper and Lower Churchill Rivers;
- Rebuild a diesel generating station in Charlottetown only—status quo;
- Construction of a hydro dam on the St. Lewis River;
- Access to Labrador-produced power;
- Industrial development and growth;
- Rates in comparison to other Labrador regions;
- Reliability and interconnection;
- Consultation and regulatory process; and
- Maintaining jobs in the communities.

4.0 Assessment of Community Feedback against Supply Options

The predominant issue raised by stakeholders in written correspondence received in November 2021 and during follow-up consultations in December 2021 and January 2022 was Hydro's assessment of the Labrador interconnection option.

The majority of stakeholders felt that recommending a diesel generating station to service the Southern Labrador Communities was contradictory to provincial and federal priorities to reduce reliance on non-renewable sources of energy and reduce greenhouse gas emissions. As a result, the focus of the consultations and discussion centred on Hydro's current ability, or lack thereof, to proceed with Labrador interconnection, and the pros and cons of the remaining alternatives (i.e., replace the diesel generating station in Charlottetown only versus a micro grid in Port Hope Simpson).

As such, during these recent consultation sessions, Hydro focused its presentation on the three supply alternatives that have been the focus of feedback received via written correspondence. The three supply alternatives reviewed in the virtual meetings were:

1) Large-scale interconnection to the Labrador system;

2) Status quo—replace the diesel generating station in Charlottetown only; and

3) Regional interconnection with a micro grid in Port Hope Simpson - phased approach (proposed within the Application that is before the Board).

The following technical and economic feasibility factors were weighed against the preferred options and discussed further in community consultations.

4.1 Opposed to Southern Diesel Micro Grid due to Preference to Implement Large-Scale Interconnection with Renewable, Clean Energy Supply from the Upper and Lower Churchill River

As outlined above, the majority of stakeholders have stated that the preferred option to serve the Southern Labrador Communities was a large-scale interconnection to central Labrador. During the consultation sessions, Hydro aimed to better explain its legislated mandate to advance the least-cost, reliable service option and that the interconnected option was not least cost (i.e., it contained a major transmission line as well as a backup system that would be required at the end of the transmission line as is seen in many other locales in Newfoundland and Labrador, such as Port Aux Basques and the Northern Peninsula). Hydro explained the cost differential of this option when compared to the status quo or when compared with Hydro's proposal and the pros and cons of the remaining supply alternatives.

Communities are divided on their level of support for Hydro's preferred option following these conversations. Since the conclusion of the consultations, Hydro has received letters of support from the

Towns of Port Hope Simpson and Charlottetown. The Town of Mary's Harbour stated that it continues to oppose the micro grid option, whereas, at the time of writing this report, the Combined Councils of Labrador have not offered a preferred option, see Attachment 2.

In the "Long-Term Supply Study for Southern Labrador: Economic & Technical Assessment,"[6] Hydro initiated an analysis to understand the requirements to connect communities to the existing electricity grid in Labrador (interconnection). The study included investigations of interconnection options in terms of cost, opportunities for renewables integration, and opportunities for fuel displacement.

4.1.1 Ability to Meet the Legislated Requirement of Least-Cost Alternative for Reliable Service

Large-scale interconnected alternatives are not currently economically feasible and do not satisfy Hydro's mandate per the *Electrical Power Control Act, 1994* to provide service at the ". . . lowest possible cost consistent with reliable service."[7]

Given the significant transmission line distances and harsh climate of the region, many existing diesel generating stations would still be required in a backup capacity for reliability purposes, adding to the capital cost. However, it is likely that the regional interconnection as proposed by Hydro would eventually be the backup to Labrador interconnection when economics and/or funding opportunities make it more feasible. As such, proceeding with the regional interconnection does not preclude Hydro and the communities from continuing to investigate the opportunities for Labrador interconnection. In fact, it is likely that this regional system would eventually become backup to renewable generation sources, potentially combined with renewable energy storage.

Hydro's proposed option for regional interconnection as part of a longer-term interconnection option is not uncommon. Hydro-Québec serves 22 off-grid systems, which must produce their own power, often using diesel generating sets. As per Hydro-Québec's Electricity Supply Plan 2020–2029, it has undertaken to connect two of these regions; however, it notes:

> Integrating renewable energy into an off-grid system involves more than adding storage batteries to ensure service reliability. A second generation source is also required and must be available at all times. For this reason, diesel-powered supply must be

[6] "Long-Term Supply for Southern Labrador," Newfoundland and Labrador Hydro, July 16, 2021, sch. 1, att. 1
[7] *Electrical Power Control Act, 1994*, SNL 1994, c E-5.1, s 3(b)(iii).

maintained. As a result, we will be replacing certain diesel generating sets and adding new ones during the period covered by the Supply Plan.[8]

4.1.2 Consideration of Associated Rate Impacts for Labrador Interconnected Customers

Some stakeholders raised the issue that electricity customers in adjacent jurisdictions in Labrador, in particular those on the Labrador Interconnected System, pay lower rates. Some stakeholders felt that by interconnecting to Labrador, their communities would avail of the currently cheaper hydroelectricity and therefore lower rates in interconnected Labrador.

Hydro explained that when investing in new infrastructure as part of the system, the new investment must be recovered in electricity rates from those using that system. Hydro explained how rates would be impacted if the Labrador interconnection was constructed without alternative funding sources, outlining that the significant transmission infrastructure investment associated with suggested Labrador interconnection would be materially paid for by electricity customers on the Labrador Interconnected System. Cost recovery would result in significant electricity rate increases for all those customers in Labrador on such an interconnected system, including those in southern Labrador, potentially more than doubling existing Labrador Interconnected System rates. Island Interconnected System customers could see a slight decrease. Residents of the Southern Labrador Communities would therefore not be eligible for the current, low-cost Labrador Interconnected System rates using the funding model to which Hydro currently has access.

4.1.3 Federal Funding Options for Transmission Infrastructure and Renewables Integration

Some stakeholders had previously raised the issue of the availability of federal funding, specifically questioning why Hydro had not sought access to federal funds available to develop renewable options in remote, Indigenous communities thereby furthering support of the Labrador interconnection option.

Hydro was aware of funding for small renewables projects in diesel communities and that funding is materially better for renewables projects in diesel communities when they are owned by Indigenous peoples. Hydro expected to work with local Indigenous government to enable such renewables installation into its micro grid. Hydro had no knowledge of a federal program that would be able to

[8] "Overview of Hydro-Québec's Energy Resources," Hydro-Québec, November 2019, at p. 16, <https://www.hydroquebec.com/data/achats-electricite-quebec/pdf/electricity-supply-plan-2020-2029.pdf>

outright fund the majority of a large-scale interconnection (approaching a requirement of funding for approximately $500 million when compared with the regional micro grid option). However, Hydro was aware of emerging opportunities to undertake a materially different ownership model for transmission infrastructure that also required many years of collaboration amongst all governmental and utility partners prior to construction commencement. To ensure it had thoroughly investigated all options, Hydro held several information gathering meetings with federal departments. Hydro sought these meetings to determine if any of the federal government funding streams beyond those previously understood were applicable to a large-scale transmission infrastructure project to support renewable energy alternatives to serve isolated, Indigenous communities. Hydro relayed its findings during the consultation sessions.

In December 2021 Hydro met with representatives from Natural Resources Canada (NRCAN), Crown-Indigenous Relations and Northern Affairs Canada, Industry Canada, and the Canada Infrastructure Bank ("CIB") to further explore the possibility of large scale transmission funding opportunities as well as gain additional insight into renewables funding. The Federal Green Infrastructure fund of $9.2 billion is available for projects across Canada and allocated by province. Newfoundland and Labrador's portion of the $9.2 billion is roughly $300 million; however, it is only used to fund up to 50% of any particular project. This funding program involves bilateral agreements with provinces and represents the primary source of federal support for critical infrastructure projects, including municipal water and sewer facilities. Of note is that even if the province were to forego critical infrastructure investments and provide the full 50% cost allocation to a high voltage transmission interconnection in southern Labrador, there still would not be sufficient funding to make the project financially viable in comparison to the proposed alternative.

Other funding programs include the Impact Canada Indigenous Off-Diesel Initiative from Impact Canada/NRCAN. This is a challenge-based funding program whereby communities receive additional funds as they advance ambitious plans to reduce diesel use for heat and power and therefore is not directly applicable to Hydro. This funding option requires collaboration with partners and a potentially new ownership model of utility infrastructure. The total value of this national program is $20 million.

CIB provides low-cost, discount financing for 80% of project costs for green infrastructure projects in Canada, which is a helpful contribution in project viability. The Labrador interconnection would likely qualify for such a program; however, CIB would not offer direct funding for capital projects. During its

meeting with CIB, Hydro inquired about similar projects in remote Indigenous communities that received federal funding, such as the Wataynikaneyap (Watay) Transmission Project. Hydro was advised that such projects, whereby federal funds were committed based on lengthy relationship and partnership development consultations, can take up to ten years to develop between the federal government, the associated utilities, and First Nations communities prior to commencing construction and would likely require significant Indigenous ownership. Such a model has not yet been developed in Newfoundland and Labrador but Hydro remains interested in commencing discussions with the appropriate parties to ascertain viability on this as Hydro consider longer-term supply opportunities.

Hydro has reconfirmed that federal funding exists for small community-level renewables projects with many projects already approved across Canada. The best funding exists for Indigenous-owned projects. Hydro will commence work immediately with the NCC and Nunacor to explore opportunities for funding for Indigenous-owned renewables projects in the Southern Labrador Communities that can also be integrated as least-cost solutions for all ratepayers.

On this basis, it is clear that large-scale interconnected alternatives are not currently economically feasible and federal subsidies should be sought in support of advancing and maximizing renewable electricity integration in to Hydro's isolated diesel systems.

4.1.4 Supporting Local, Indigenous Ownership with the NCC and Nunacor

During consultation sessions, Hydro heard from a majority of representatives of the desire to support Indigenous ownership of energy resources in the area. Following its stakeholder session with the NCC, Hydro received correspondence from the organization detailing its concerns about Hydro's long-term supply plan for southern Labrador. This correspondence is included in Attachment 2. Following meetings with federal government departments, as outlined in Section 4.1.3, Hydro held follow-up meetings with representatives of the NCC and Nunacor to discuss the prospect of a partnership between the groups to further opportunities to access federal funding for Indigenous-led ownership of energy infrastructure, with an immediate focus on community-based renewable projects.

Hydro has stated its commitment of support to the NCC and its business arm Nunacor toward the realization of their energy interests in their communities, including development of renewable sources of generation to aid in the maximization of diesel fuel displacement. Hydro is supportive of such initiatives as they also provide savings to Hydro's customers under power purchase agreements. Such arrangements have been successfully implemented in Hydro's isolated systems, including Ramea and

Mary's Harbour. Hydro is also collaborating with Nunatsiavut leadership in Nain on such a renewable energy project.

In the near term, Hydro is committed to supporting NunatuKavut-owned renewable energy projects in the region. Hydro is keen to provide technical and regulatory support to advance these projects as quickly as possible and Hydro personnel are ready to begin discussions.

Hydro is also committed to working with the NCC and other Indigenous governments to explore longer-term models for Indigenous ownership in utility infrastructure beyond community-based renewable projects, such as participation in transmission projects. Such models have been emerging in the electricity sector in Canada to further drive sustainability, particularly in northern regions. Significant federal subsidies available under such an arrangement could increase the viability of interconnection projects and further reduce diesel dependence into the future. The potential positive impact of such a model on the cost of service is therefore of great interest to Hydro and its customers.

Hydro suggested to the NCC the establishment of a working group to explore Indigenous participation models in electric utility infrastructure in our province. As a first step, Hydro has committed to commence discussions on the relationship and the possibilities for the near-term southern Labrador project and will be working with NCC leadership to formalize this intention. This relationship will maximize participation of the NCC through all stages of the southern Labrador project as well as the more complex longer-term model considerations that will be explored further in the coming months.

4.1.5 Potential for Integration of Renewables under Regional Interconnection

As noted in Section 4.1, the majority of stakeholders preferred the Labrador interconnection option as it would allow the communities to be served with hydroelectric sources. Interconnection to the Labrador Interconnected System is currently not economically feasible given the need for the least-cost option and the funding models available to Hydro; however, Hydro's recommended option provides the potential for the integration of more renewables in all communities under the micro grid option than if all communities remained supplied in the status quo.

As per Hydro's Application, Hydro investigated the potential for use of renewables for the region. Currently, wind and solar are available in Mary's Harbour; however, both sources are 'non-dispatchable' meaning they are intermittent and supply varies throughout the days, seasons, and years. Therefore,

renewables cannot be relied upon to meet the firm supply needs of customers, especially in an area that experiences harsh winter conditions for an extended winter season.

As Labrador interconnection is not economically feasible, and to ensure a reliable supply of electricity for isolated communities and their residents to operate safely, Hydro must continue to rely on diesel generation for reliable firm electricity supply until renewable storage options are tested to be reliable for long-term energy storage and are also economically viable. A micro grid system, supplied by diesel, or through increasing renewables storage, will remain isolated from the main grid until a new transmission model can be developed and funded, something Hydro is committing to begin exploring while also recognizing the many years of effort such a project may require.

Through the stakeholder consultation process, Hydro clarified for parties that, with the proposed project, there will be an approximate 20% reduction of diesel usage simply by having a larger system that can run more efficiently. This reduction will grow larger when renewables projects are constructed and commissioned. Hydro also recognizes that the integration of renewable energy sources is of particular interest to stakeholders, and it is of importance to Hydro as well, in the collective efforts to reduce greenhouse gas emissions from its operations.

4.2 Rebuild Diesel Generating Station in Charlottetown Only

Some stakeholders questioned whether it would be more effective to rebuild the diesel generating station in Charlottetown thereby allowing Hydro to focus its efforts on securing funding and support to advance the longer-term preference for Labrador interconnection. Hydro outlined the following information that it assessed as part of its Application and the evidence for its recommendation to supply the Southern Labrador Communities with a micro grid.

The direct rebuild of the Charlottetown Diesel Generating Station to the same specifications that existed prior to the 2019 fire is not appropriate for long-term supply for Charlottetown. It is Hydro's view that it would be imprudent to rebuild the exact facility that previously existed without consideration for the current and future needs of the facility and community. For example, the previous generating station did not have adequate capacity to meet Hydro's firm capacity criteria without the support of mobile units to support peak summer loading conditions.

As noted in Hydro's Application, the diesel generating station would require a capital investment of at least $21.4 million to meet the current and future needs of the community. However, the need to

provide a generation solution for Charlottetown required Hydro to review a regional interconnection option to determine the least-cost scenario for the area. When considering all the communities, the regional interconnection option is the most financially viable option due to ongoing costs in other community's diesel systems as well.

Further, the proposed regional interconnection will offer benefits that are not reflected in the least-cost analysis. For example, the region will have:

- The regional diesel generating station which would play the role of a backup facility to a long transmission line should a new funding model be able to be developed as a backup is required for such a long line in any circumstance;
- Immediate reduction in greenhouse gas emissions through the operation of a more efficient diesel generating station;
- Improved reliability as a result of the interconnection of the four distribution systems and the larger regional diesel generating station;
- The flexibility to meet potential future load growth requirements with minimal additional capital investment; and
- Increased potential for integration of renewable energy sources owned by Indigenous governments with significant funding from outside provincial sources resulting in a positive impact on rates.

4.3 Hydro Dam on the St. Lewis River

The most favorable hydroelectric generation scenario in the southern Labrador region to meet the future supply needs in the area involves two hydroelectric developments on the St. Lewis and Gilbert Rivers. This alternative is technically viable; however, it was deemed not feasible due to the high capital cost and environmental constraints in comparison to the other potential alternatives. This analysis is presented in Hydro's Application.[9]

[9] "Long-Term Supply for Southern Labrador," Newfoundland and Labrador Hydro, July 16, 2021, sch. 1, att. 1, s 3.1, at pp. 6/6 to 13.

4.4 Access to Labrador-Produced Power

Community representatives noted during several consultation sessions that despite having two of the largest hydroelectric resources in their backyard, their communities were continuing to rely upon diesel generation and could not avail of this renewable resource.

Hydro understands the desire of Southern Labrador Communities to avail of the renewable energy sources in its jurisdiction. As outlined in Section 4.1.1, Labrador interconnection is currently not economically feasible. However, Hydro is preparing to commence discussions with the appropriate governmental and Indigenous partners on the consideration of a longer-term model as outlined in Section 4.1.4.

4.5 Industrial Development and Growth

Hydro has historically received requests to connect relatively large customers (e.g., fish plants) and has frequently had to rely on mobile diesel generation to accommodate these new loads. The capacity of the regional southern Labrador interconnected system can be expanded to accommodate more than 5 MW of new load. This will allow the ability to accommodate significant development in the region.

The issue of economic development and the potential for new large entrants to southern Labrador to mine rare earth mineral deposits in the area was raised during the consultation sessions. It was suggested that opportunities for regional expansion could be much more significant if a high voltage transmission interconnection were available. As outlined in above in Sections 4.1.3 and 4.1.4, Hydro is committed to working with the appropriate government and Indigenous partners to explore new models that may result in the longer-term Labrador interconnection that would enable and be responsive to increased demand due to any large-scale economic development in the area.

4.6 Rates in Comparison to Other Labrador Regions

The Southern Labrador Communities currently pay similar rates for base block electricity as customers on the Island Interconnected System and are subsidized as part of the rural deficit due to the high cost to supply remote communities. The issue of customers paying lower rates in adjacent jurisdictions in Labrador, in particular those on the Labrador Interconnected System, was raised as an area of concern.

In the consultation sessions, Hydro outlined that Labrador interconnection would not result in Southern Labrador Communities receiving the same rate as central Labrador. In fact, as noted in Section 4.1.2, the significant cost associated with interconnection would be materially paid for by electricity customers on

the Labrador Interconnected System. Cost recovery would result in significant electricity rate increases for those in Labrador on the interconnected system, potentially doubling existing Labrador Interconnected System customer rates. Customers on the Island Interconnected System may see a slight rate decrease.

4.7 Reliability and Interconnection

Hydro conducted reliability analyses of the proposed project, and it is expected to result in overall improved reliability for the region, largely due to improved performance of a single, centralized diesel generating station as opposed to four separate, smaller diesel generating stations. With the proposed configuration of the regional diesel generating station, Hydro estimates an approximate 18% improvement in both all-cause unavailability and expected unserved energy.

Hydro acknowledges that Labrador interconnection would provide the most reliable option for the Southern Labrador Communities; however, as outlined in Section 4.1.1, Labrador interconnection is not currently economically feasible.

4.8 Consultation and Regulatory Process

Several communities raised frustration with the consultation and regulatory process undertaken in the spring of 2021. Specifically, it was stated that it was not clear that Hydro had intended to submit its application for the regional interconnection without further consultations to occur and that Hydro had not made it clear to stakeholders the next steps in the regulatory process. As such, some communities felt that it had no choice but to submit correspondence to the Board and to Hydro to ensure its issues were heard and addressed. As noted above, Hydro acknowledged during its sessions that it could have done a better job sharing information related to the southern Labrador supply options with stakeholders and committed to provide updates in the future as the application progresses.

4.9 Maintaining Jobs in Communities

No significant changes in overall staffing levels are expected; however, Hydro will complete an operational review that will determine staffing requirements for the new diesel generating station and distribution system, which will inform the development of reasonable staffing plans. Hydro communicated that, over time, it expects skill sets will evolve from the current requirement to a new requirement as distributions lines increase substantially but diesel generating units decrease. Hydro also highlighted that, should Indigenous governments construct renewable energy projects in the

communities, there should be employment opportunities for such facilities available through those governments.

5.0 Conclusion

5.1 Hydro's Recommended Alternative and Long-Term Plans for Consideration

In December 2021 and January 2022, to better understand the concerns raised by stakeholders in southern Labrador, Hydro carried out further consultations. These consultations were held to ensure all viable options have been considered, to share information, to establish better relationships, and to offer the opportunity for the Southern Labrador Communities to provide input into Hydro's next steps.

Following the stakeholder consultations and the analysis, Hydro continues to recommend alternative 3a: Southern Labrador Interconnection – Phased Approach as per its Application.[10] The issues raised in stakeholder sessions have been assessed against the supply options and, as cited in Section 4.1, southern Labrador interconnection remains the most economically viable, least-cost option for supplying the communities with reliable power.

This option is also consistent with practice in other jurisdictions, as per Section 4.1.1. The regional interconnected system as proposed by Hydro could eventually become the backup to Labrador interconnection when economics and/or funding opportunities make it more feasible. As such, proceeding with the regional interconnection does not preclude Hydro and the communities from continuing to investigate the opportunities for Labrador interconnection, which Hydro is committed to undertaking.

To that end, Hydro views proceeding with the southern Labrador interconnection as Phase 1 of a longer-term project. Hydro has stated its commitment and support to the NCC and Nunacor toward the realization of their energy interests in their communities, including development of renewable sources of generation to aid in the maximization of diesel fuel displacement in the short term. Hydro is supportive of such initiatives as they also provide savings to Hydro's customers under power purchase agreements.

[10] "Long-Term Supply for Southern Labrador," Newfoundland and Labrador Hydro, July 16, 2021, sch. 1, s 4.3, at p. 6/5–23.

Hydro recognizes that its decision may not be supported by all stakeholders; however, it is satisfied that all options have been thoroughly investigated and is making its recommendations based on sound utility practice in the best interest of all customers.

Attachment 1

Community Consultation

Proposed Southern Labrador Interconnection

January 2022

newfoundland labrador hydro

Community Consultation

Proposed Southern Labrador Interconnection

January 2022

newfoundland labrador hydro

Our Objectives for Discussions

- To better explain Southern Labrador electricity supply alternatives and build greater understanding of the advantages and disadvantages of each alternative.

- To continue meaningful discussion and idea exchange with interested parties regarding Hydro's proposed Southern Labrador Regional Interconnection project.
  - Explaining three alternatives for future supply of reliable power for the South Coast:
    1. High voltage transmission interconnection to Labrador Interconnected System (400 km line)
    2. Continued isolated systems with good potential for integration of renewable
    3. Regional Interconnection with maximum potential for integration of renewables

Our hope is to gain alignment that the approach which meets Hydro's obligation of providing electricity at the "lowest possible cost consistent with reliable service" also supports the interests of the communities on the South Coast.

Content

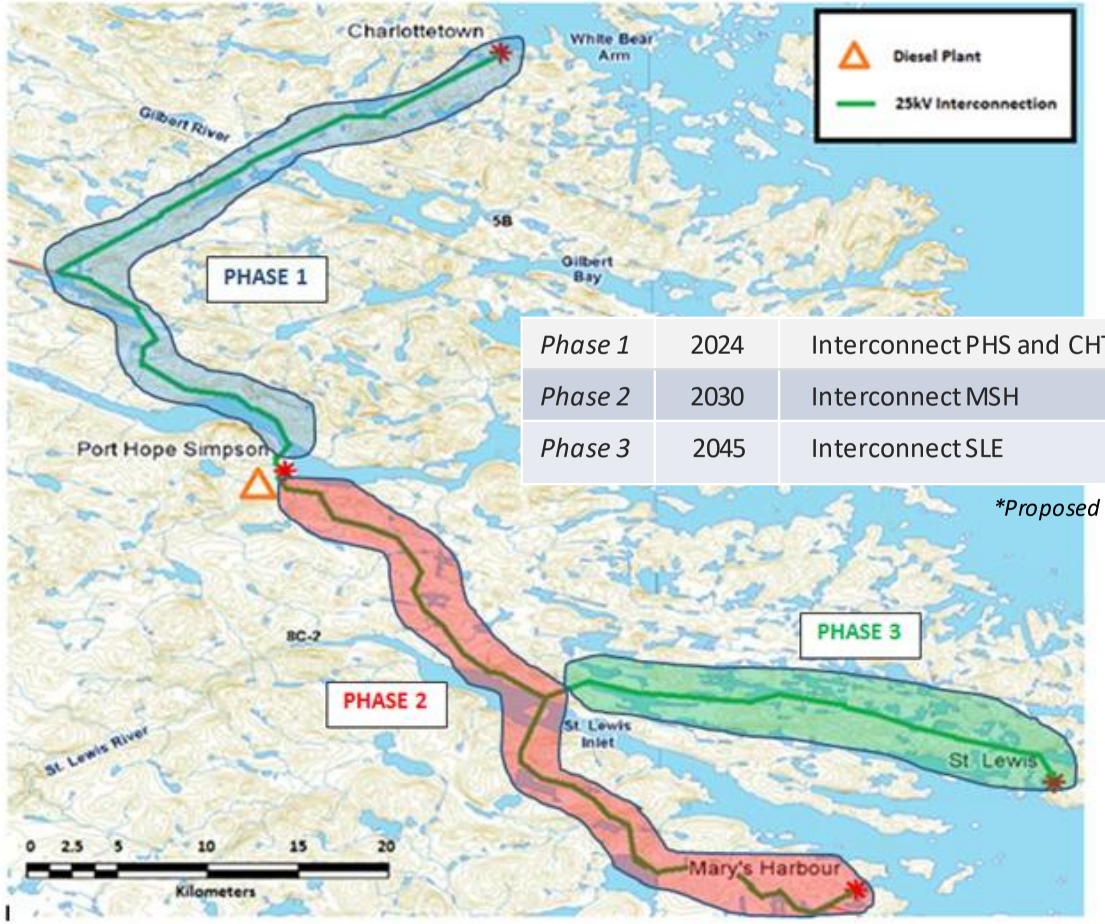
- Background information
- Recap of process to date
- Aspects considered in comparing the three alternatives include:
  - Reliability and ability to support load growth
  - Capital and operating costs
  - Impact on rates locally, and provincially
  - Firm generation requirements and number of diesel units
  - Job opportunities
  - Renewable energy project development potential
  - Renewable energy project federal funding opportunities
  - Ownership by Indigenous governments and organizations
- Assessment Results
- Key Benefits
- Looking to the Future
- Next Steps
- Supporting Info

Background Information

- Diesel plant in Charlottetown destroyed by fire in 2019
  - Since then, the town has been supplied by 3 mobile diesel units (a temporary solution that is not appropriate for long term supply and provides no ability to allow load growth or integrate renewables)

- To find the best solution, several alternatives were assessed. Conclusion: Southern Labrador mini-grid
  - Firm power supplied by a new higher efficiency diesel plant in Port Hope Simpson (centrally located), with communities interconnected in phases over time, immediately reducing diesel consumption in interconnected communities by 15%
  - Least-cost, reliable; reduces diesel use; enables renewable energy
  - Incorporate privately owned renewable sources to reduce diesel use and in the long term, aim to eliminate diesel use to true back up (similar to gas turbine use in Happy-Valley Goose Bay)

Proposed Southern Labrador Interconnection



Phase 1	2024	Interconnect PHS and CHT
Phase 2	2030	Interconnect MSH
Phase 3	2045	Interconnect SLE

**Proposed timeline*

Recap to date

- Met with Towns and others in early 2021 to provide information on the proposed solution
- Hydro continued finalizing its application and submitted to PUB on July 16, 2021
- Some parties filed concerns to the PUB in early November 2021
  - In light of this, Hydro requested the PUB pause review so that further discussion could occur
- Hydro met with representatives of two distinct federal groups to discuss funding for renewables and/or interconnection to the Labrador Interconnected System

		Large-Scale Interconnection (to Labrador System)	Continued Isolated Systems (Status Quo)	Regional Interconnection (Proposed)
Costs & Rates	**Capital costs**	> $500 million (plus costs for the back up facilities that would be required)*	Approx. $70 million total by 2045 ($21 million by 2023 to replace firm power for Charlottetown)	Approx. $70 million total by 2045 ($50 million first phase 2024)
	Operating costs	Energy cost tied to market. Other O&M limited primarily to line maintenance	Least efficient use of diesel and least potential for renewables	More efficient diesel generation and better potential for renewables
	Rate impact for current isolated customers	Move to Labrador Interconnected System rates (see below for impact on LIS rates)	Status quo	Diesel savings will slightly reduce rates vs isolated option
	Rate impact for other customers	Labrador Interconnected rates would increase substantially, island rates would see small drop	Lowest initial capital, but highest future capital and O&M costs which impact Rural Deficit	Lower long terms costs (vs isolated) will reduce Rural Deficit, slightly reducing rates everywhere
Reliability	**Reliability benefit**	Likely most reliable - generation outages negligible	Least reliable	Generation significantly more reliable than isolated scenario, and lines relatively short
Industry Growth	**Load growth ability**	Significant capacity for growth	Little capacity for growth without diesel plant expansions	Designed to serve twice the existing load
Reducing Diesel	**Number of diesel units**	Replace 13 units with 5 (room for 6th) as back up still required at end of transmission line	Status quo	Replace 13 units with 5 (room for 6th)
	GHG reduction/ Renewable sources	100% renewable day one (except for outages)	Potential to integrate renewables over time	Significantly better potential for future renewables vs isolated option, especially as technology is proven
	Federal funding for renewables	Low environmental or economic incentive for new renewables funding as supply would be 100% renewable already (not saving diesel)	Excellent potential	Excellent potential
	Local new job opportunities	Minimal longer term, though potentially available during line construction	Jobs to support construction and long term operations of privately owned renewables project	Jobs to support construction and long term operations of privately owned renewables project
	Indigenous ownership	No NL precedent for non-utility transmission line ownership. Little incentive for new renewables.	Potential for future renewables financed based on revenue tied to diesel savings which would be less than the regional interconnection renewables opportunity	Maximum potential for future renewables financed based on revenue tied to diesel savings

**Funding for the larger interconnection is not assumed to be able to be funded by the Federal government – see "additional information section" of this deck*

Assessment of Options

Criteria are not necessarily weighted equally, but presented for overall considerations.

- The Regional Interconnection was ranked “best” for more than half (6/11) of the assessment criteria, and “worst” for none
  - Transmission interconnection also ranked “best” on 6, but ranked “worst” for all 5 others.
  - Isolated option only 3 “bests”, 6 “worsts”.

- Hydro proposes that the Regional Interconnection (a southern Labrador mini-grid) is the optimal balance considering all factors.
  - It also aligns with legislated provincial energy policy that electricity should be provided at the “lowest possible cost consistent with reliable service”

newfoundland labrador hydro

Key Benefits of Regional Interconnection

- The **most cost-effective** means of serving all customers in south, central & western Labrador
  - For customers on the south coast to be interconnected to the larger Labrador system, rates for all existing customers would increase substantially (more than double) to pay for new, large transmission
- When compared to the continued isolated option, it will provide:
  - Increased ability to **accommodate load growth in Charlottetown and other communities**
  - **Improved reliability for all communities**
  - **Reduced diesel** use and GHG emissions for all communities
- More potential for development of renewable generation compared to the other options
  - Potential for creation of jobs to construct, operate and/or maintain renewable assets
- Has the greatest potential for federal funding in support of renewables (particularly, Indigenous owned projects) in comparison to the other options

newfoundland labrador hydro

Looking to the Future

- A southern Labrador mini-grid (regional interconnection):
  - Provides critical near-term reliability
  - Reduces diesel use and puts the region on a path for further diesel displacement in the future
  - Would not limit development of renewables OR interconnection to the larger Labrador system

- Opportunity to Interconnect to Labrador Interconnected System via 400 km line
  - Regional plant still needed to provide essential standby/backup in the case of transmission interconnection to the main Labrador grid – all long transmission lines have a back up generator at end of line
  - In fact, it is likely that this regional system would eventually become backup to renewable generation sources, potentially combined with energy storage.
  - Hydro is committed to advancing discussions with Indigenous and community leaders to pursue federal funding for the larger interconnection, over the longer term

Next Steps

- On January 31, Hydro is required to update the PUB on this latest round of consultation, and anticipates requesting the PUB process resume at that time
  - Hydro intends to conclude these latest discussions with Labrador community leaders and other stakeholders well in advance to the January 31 submission
  - Hydro will include in its January 31 update a synopsis of the outcome of the discussions
  - There will be future opportunities for stakeholder submissions within this PUB process, as well as to the provincial government within the Environmental Assessment process

- If project receives regulatory approval, Hydro is committed to continuing constructive discussions with the communities/residents and other interested stakeholders, including for any Environmental Assessment processes

QUESTIONS / DISCUSSION

SUPPORTING INFORMATION

newfoundland labrador hydro

Additional questions Hydro has received

- Why is Hydro building diesel generation at all, instead of focusing on renewables?
  - The variability and unpredictability of renewable sources, as proven today, mean sometimes it is insufficient to serve customers' needs. Energy storage systems can provide some capacity following a drop in renewable output, but current storage systems can provide capacity for hours, not days or weeks which it is not prudent to plan for considering the harsh Labrador winters and difficult access. Hydro must ensure it can reliably serve all customer load even after weeks of inadequate renewable sources, and diesel generation is the least cost option.

- Why would Hydro continue to maintain diesel generation if the transmission interconnection to the main Labrador grid were to proceed?
  - It is standard practice to maintain standby generation at the end of long radial lines with no redundancy (as was proposed for the transmission interconnection). Hydro has this arrangement in Happy Valley-Goose Bay, the Northern Peninsula, and Port-Aux-Basques. Clear requirement for back up generation at the end of a long transmission line was clearly demonstrated in recent power issue in Upper Lake Melville.

- Could diesel (and GHG) reductions be greater than stated in the PUB application?
  - The stated amounts are based solely on more efficient operation of diesel generation, and any renewable energy integrated in these communities in future will add to these reductions.

Additional questions Hydro has received

- How does the 50 year life of a diesel plant affect the ability to transition more aggressively to renewable generation?
  - Over the life of this asset, it is reasonable to believe that it will transition to become a backup to renewable generation sources, potentially combined with energy storage. This means that it will only generate if renewable energy, energy storage, or a transmission line become unavailable or insufficient – a true back up like the gas turbine in Happy Valley functions

- Could phases 2 and 3 be advanced to accelerate adoption of renewable energy?
  - Hydro could potentially use the savings associated with purchasing renewable energy instead of diesel fuel to justify any additional cost of early implementation of these phases
  - Regardless, renewables could be integrated prior to phases 2 or 3, or even prior to phase 1*
    - The primary reason for phasing is to allow learning from phase 1, or any subsequent development such as load growth or renewable technology advancements, to inform a decision on phases 2 and 3

*It would not be practical to integrate renewables in Charlottetown while it is being served by mobile units

Known Federal Funding Opportunities for Renewables

- Hydro will continue to investigate funding opportunities that could make the larger interconnection feasible. To date, insufficient funding sources have been identified, but those assessed are described below
  - Infrastructure funding:
    - Newfoundland and Labrador's portion of the $9.2B Green Infrastructure fund is $300M. To date, $66.7M is approved and announced so $232M remain.
    - Newfoundland and Labrador's portion of the $2B Rural and Remote Infrastructure fund is $103M. To date, $36M is approved and announced so $70M remain.
    - Canada Infrastructure Bank
      - Provides very cost effective borrowing which can aid in major projects such as the larger interconnection but is not a “grant” for major capital costs

Known Federal Funding Opportunities for Renewables

- Impact Canada Indigenous Off-diesel Initiative (IODI) - Impact Canada/NRCAN
  - This is a challenge based funding program which communities receive additional funds as they advance ambitious plans to reduce diesel use for heat and power. Funding is for $20k, $1.3M, and $9M as communities advance through the competition.

- Smart Renewables and Electrification Pathway (SREPs)
  - $964M total (maximum project size is $50M)
  - Includes three streams (Established Renewable, Emerging Technologies, and Grid Modernization)
  - This is a new program and there isn't much history. It appears that this could support community based renewable energy projects like CERRC.

Known Federal Funding Opportunities for Renewables

- CERRC (Clean Energy for Rural and Remote Communities) supports a suite of diverse projects across Canada, to reduce the reliance of rural and remote communities on diesel fuel for heat and power.
  - For a $500M project, CERRC would not be an option at this time.
  - CERRC would be an option for funding for renewable projects as evidenced by other projects across Canada, some of which are described on the following slide

Funding Examples - CERRC

- Some examples of typical projects, and the amount of CERRC funding provided:
  - St. Mary's River Energy, Mary's Harbour, NL
    - **$2,500,000** invested in support of a project to refurbish an existing hydroelectricity dam and integrate it with new solar panels and lithium-ion battery. This will reduce diesel consumption In Mary's Harbour by 30 percent per year.
  - Nihit Corporation, Inuvik, NT and Iqaluit, NU
    - **$3,300,000** invested in support of a project to combine solar power with battery storage to help three local businesses and 32 residential units in Inuvik, NT and Iqaluit, NU run almost exclusively on solar energy during the spring and summer months. This project will improve electricity reliability, create local employment and generate 1.25 megawatts of new reliable electricity annually, cutting local diesel consumption by 380,000 litres per year.
  - Three Nations Energy, Fort Chipewyan, AB
    - **$4,500,000** invested in support of a project to deploy a new 2.2-megawatt solar farm to complement an existing 400 kilowatt installation, making it the largest off-grid solar project in Canada. In addition, a battery storage system and micro-grid control system will improve reliability of the grid. The project's combined solar and battery energy storage system will displace 650,000 litres of diesel fuel per year, reducing greenhouse gas emissions by 1,743 tonnes annually.
  - Additional projects are described on the website linked below
    - https://www.nrcan.gc.ca/reducingdiesel/clean-energy-for-rural-and-remote-communities-funded-projects/22524

www.nlhydro.com

twitter.com/nlhydro

facebook.com/nlhydro

Attachment 2

Stakeholder Correspondence

newfoundland labrador hydro

NunatuKavut
our ancient land

OFFICE OF THE PRESIDENT

December 16, 2021

Jennifer Williams
President and CEO
NL Hydro
PO Box 12400
St. John's, NL A1B 4K7
VIA EMAIL: JenniferWilliams@nlh.nl.ca

Dear Ms. Williams,

On behalf of the NunatuKavut Community Council (NCC) and Nunacor, I thank you for meeting with us on two different occasions over the past month to provide more information on NL Hydro's Public Utilities Board (PUB) application for approval of the Construction of Phase 1 of Hydro's Long-term Supply Plan for Southern Labrador.

Our team certainly appreciated learning more about this project and having an opportunity to voice the concerns we expressed in previous correspondence. While we share the urgency in finding a longer-term energy solution for our coastal communities in NunatuKavut, especially Charlottetown, we want to ensure we take the time that is necessary to undertake a thorough review of the information available on this project. This will include consideration of the energy security needs expressed by NunatuKavut communities as part of our ongoing community-based energy research. We have hired Dunsky Energy Consulting to assist us with this important work. Following our own initial internal assessment, as well as that of our consultant, we offer the following for NL Hydro's consideration:

- Given the gaps identified to date, we strongly advise that NL Hydro extend the deadline of its response to the PUB of to allow for a more fulsome exploration of the role that renewable energy resources and demand-side management strategies could play to reduce the reliance on diesel generation over the timeframe under examination. In doing so, we ask that NL Hydro gauge the uncertainties around load growth, project phases, technology innovation, and other risks including cost of carbon and diesel fuel cost.

- The current analysis only compares options based on their relative cost to NL Hydro. Considering the communities' interest in the systems, and the overall context of electricity provision in the province, we ask that the various options are also compared from a societal perspective that accounts for the cost of carbon emissions, local economic benefits from distributed renewable energy generation and demand-side management investment, among other considerations.

…/2

200 Kelland Drive
PO Box 460, Stn. C
Happy Valley-Goose Bay, NL A0P 1C0
Tel: 1 (877) 896-0592 (toll free) or 1 (709) 896-0592
Fax: 1 (709) 896-0594
www.nunatukavut.ca

- We request that NL Hydro clearly define how and under what conditions renewable energy could be added to the proposed system. We would also like to see explained how the proposed plan will impact the financial viability of adding distributed renewable energy to the system, and the schedule of possible renewable energy investments. This analysis should also include an indication of how the renewable energy and storage systems would be compensated for their capacity benefits, as well as their energy benefits.

- We ask that we move expeditiously to explore your suggestion of a joint working group to facilitate our ongoing work relating to this process. This would include discussions around determining that this group might look like and its scope of work.

NCC will continue to work with Dunsky on a thorough review of the supply plan proposal over the coming weeks. Once we receive your response to the above considerations, we will be better positioned to further our analysis and reconvene in the new year. We are hopeful that, through these discussions, we can continue to build on our Community Development Agreement and strengthen and further improve the relationship between NCC and NL Hydro for the benefit of NunatuKavut Inuit and the sustainability of our communities.

Nakummek,

Todd Russell, President
NunatuKavut Community Council

Port Hope Simpson Town Council
1 Potter's Lane, P.O. Box 130
Port Hope Simpson, NL A0K 4E0
Tel: (709) 960 0236
Fax: (709) 960 0387
Email: porthopesimpson@nf.aibn.com

January 19, 2022

Ms. Cheryl Blundon
Director of Corporate Services & Board Secretary
Board of Commissioners of Public Utilities
P.O. Box 21040, St. John's NL A1A 5B2

Re: Submission for Long-Term Study for Southern Labrador:

The past summer (2021) Hydro presented their long-term plans to the Port Hope Simpson Town Council to address the reliability, safety, and environmental concerns associated with the long-term use of mobile generation for the region. Town Council met virtually with Hydro again on January 10th, 2022 when the three options to address the above-noted concerns were thoroughly discussed again. These three options were: 1) the addition of infrastructure to improve reliability for the continued operation of the mobile gensets, 2) the direct replacement of the Charlottetown Generating Station and 3) interconnection of the Southern Labrador Communities with supply provided by a single regional diesel generating station in Port Hope Simpson.

Following those presentations Council selected the Regional Interconnection of the Southern Labrador Communities as the town's preference for the delivery of long-term supply needs for Southern Labrador Communities.

The Port Hope Simpson Town Council understands this supply will be phased in over an approximate twenty year period which will align with the existing replacement schedule of the existing assets. This time period is clearly referenced in Hydro's application to the Public Utilities Board and we will not reference that information in this submission.

In their briefing with the Town Council, Hydro's representatives informed us that following a cost-benefit and sensitivity analysis, Hydro concluded that the most economically feasible option to meet the long-term supply requirements of Charlottetown and the region was a phased approach to a 25 Kv interconnection with a single large regional diesel generating station in Port Hope Simpson.

Hydro has studied the long-term supply options for certain communities in Southern Labrador since the early 2000's and in so doing has examined the possibility of interconnection due to the potential for reductions in operating and maintenance costs and improved reliability in the region.

There are five neighboring communities in Southern Labrador that are serviced by four separate isolated

diesel plants. These communities are: 1) Charlottetown-Pinsent's Arm, 2) Port Hope Simpson, 3) St. Lewis and 4) Mary's Harbour.

In 2019 a fire at the Charlottetown Diesel Plant left the plant inoperable and an interim solution was implemented. It was because of the Charlottetown situation Hydro expedited their consideration of interconnection options for the Southern Labrador region.

The Port Hope Simpson Town Council will identify its reasons for selecting the Interconnection of the Southern Labrador Communities as the best way forward solution to provide the supply of electricity to this region and they are as follows:

1. Hydro's conclusion that this approach is the most economically feasible option to meet the long-term supply requirements of the region.

2. The phased- in approach will be over a twenty year period to align with the replacement of the existing assets with Charlottetown-Port Hope Simpson beginning as a first stage in 2024, which will accommodate the present concern in Charlottetown. Once this portion is completed Hydro can use updated cost estimates to revise economic analyses to determine optimal timing for future phases.

3. A southern Labrador interconnection will also reduce design restrictions to individual renewable energy facilities allowing the communities to pursue that potential. Mary's Harbour has already pursued this option and can be an example and testing board for the other communities in this region.

4. Hydro's regional efficiency plan indicates that a regional plant that has bigger engine sizes serving a load that is larger, more diversified and stable is expected to outperform any of Hydro's existing plants.

5. Distribution Regulators were assumed to have no impact on reliability, when these devices malfunction it only affects their ability to regulate voltage and does not cause a system outage.

6. The new interconnection lines will be built alongside the existing paved highway which will improve reliability and be more accessible for maintenance and troubleshooting. A large portion of L1301 and some of Hydro's 66V transmission does not have this operational luxury.

7. Council's research has shown that there is approximately two hundred remote communities in Canada that are presently served by diesel generation and it is our opinion that technology has not reached a point where small communities can operate solely on "green energy". It only goes to prove that diesel generation as shown in the Interconnected approach for Southern Labrador Communities is the most feasible route to take.

8. Council has considered Hydro's analysis confirming the potential for renewable energy penetration in the four communities. Port Hope Simpson will consider all avenues for renewable energy. A Southern Labrador interconnection supplied by a single diesel would serve a larger, more diversified and stable load throughout the year, this change in demand would provide a greater opportunity to offset diesel consumption with renewable energy.

9. Port Hope Simpson has approached Hydro to provide the interior-to-exterior mechanism so that the town can construct a greenhouse using the waste heat from the new facility. We know it is insignificant to this project as a whole but can and will provide starter vegetable and flower plants to all the community gardens in the region as well as lettuce, tomatoes and other vegetables to households. The first hydro plant in Port Hope Simpson provided the town with a waste heat greenhouse, it works very well, and was operational until the existing plant was constructed.

10. The population of the five communities which would be users of this regional diesel generation plant are as follows;

Charlottetown - 284

Pinsent's Arm - 51

Port Hope Simpson - 412

St. Lewis - 194

Mary's Harbour - 341

Totaling 1282 persons.

18-20 percent of the population in the region are 65+ and on a low fixed income, 60-70% are seasonal workers, approximately 17% are students/preschool, the remainder 5-6% are full time workers and there is a percentage receiving Social Assistance.

Option - Continued Isolated Systems (status quo) costing 70 million by 2045, 21 million to replace the Charlottetown plant (in 2023) and the other existing three plants by 2045. This option would have the least efficient use of diesel, have the least potential for renewable and would be the least reliable.

Option- Large scale Interconnection (to Labrador Connection), Capital costs would be $ 500 million plus costs for the backup facilities that would be required. Operating costs and rate impact for current isolated customers and rate impact for other customers would see Labrador Interconnection rates increase substantially and island rates would see a small drop. The incentive for renewable would be 100% renewable already (not saving diesel). There would be no precedent for non-utility transmission line ownership. Little incentive for new renewable.

The Option Status Quo makes no sense at all only that Charlottetown would have a long term solution with the other three communities coming on-stream when the present plants expired. There still would be four isolated plants in the region.

Option-Large Scale interconnection is not financially viable considering our aging population, out migration and decline in economic growth. We must consider that the commercial fishery is our region's main industry with the Labrador Fishermen's Union Shrimp Company being the main employer. When we look at the decline in crab and shrimp stocks and reductions in quotas has been happening, as a region we must use caution. Should the shrimp and crab zones close or the fishery further decline, this

region would suffer immensely. The toll of substantially increased hydro rates would be devastating to the region.

The Port Hope Simpson Town Council is thanking the Hydro representatives for meeting with us on two occasions. The presentation was very informative and well presented. Our questions were answered and we have an understanding of the options and the pros and cons of each. We trust the Public Utilities Board will make the best decision for the region.

Mayor Margaret Burden & Councillors

CC Jennifer Williams, President and CEO NL Hydro

P.O Box 151
Charlottetown, NL
A0K 5Y0

T: (709) 949-0299/297
F: (709) 949-0377
E: ctown@nf.aibn.com

January 24th, 2022

Public Utilities Board
120 Torbay Rd
St. John's, NL
A1A 2G8

Re: Letter of support for new Regional Powerplant in Southern Labrador

Public Utility Board of Directors,

The Town Council of Charlottetown is formally requesting that the Public Utility Board (PUB) approve the proposed plan by NL Hydro for a regionalized Power Plant to service the communities from Charlottetown to Mary's Harbour and all communities in-between. After losing the Charlottetown Power Plant to a fire in November 2019, the communities of Charlottetown and Pinsent Arm have been without a sustainable power source. The Charlottetown Community Council views the proposal being presented by NL Hydro as a rational and reasonable resolve to our power issues.

During a meeting between the Charlottetown Community Council and NL Hydro on May 5th 2021 and again on January 12th 2022, executives for NL Hydro outlined a plan for a regionalized diesel plant to be placed in the community of Port Hope Simpson. This plant will provide power to the communities of Charlottetown, Pinsent Arm, Port Hope Simpson, St. Lewis, and Mary's Harbour. Though our council had many questions and concerns regarding a new diesel plant in the region, NL Hydro addressed those concerns and ascertained that the new diesel plant would be an improved solution for the region. On May 5th NL Hydro stated that with 20% more efficient diesel use, with better potential for diesel power being offset by renewable resources and employment not decreasing, the outlined plan was viewed as an improved solution. NL Hydro added, during the January 12th meeting, that the new plant would be able to meet future prospective growth in the region, well addressing growing concerns connected with environmental changes. For these reasons our Council supports this project. Though we need this solution for our communities' immediate needs, the outlined benefits will impact the entire region in a positive manner.

P.O Box 151
Charlottetown, NL
A0K 5Y0

T: (709) 949-0299/297
F: (709) 949-0377
E: ctown@nf.aibn.com

Our Council is aware there have been concerns raised by other communities that have managed to stall this project. This is not acceptable. The concerns these communities have are not taking into consideration that they have Power Plants. If they were in a similar situation to Charlottetown and Pinsent Arm, they would be trying to push this project forward, not holding it back. The Public Utility Board must approve this project as it will address our regions current demands, well securing sustainable power for our future needs as well.

Thank-you,

Charlottetown Town Office
On Behalf of Charlottetown Town Council

Mary's Harbour Town Council
60 Hillview Road, P.O. Box 134
Mary's Harbour, NL A0K 3P0

Phone: 709 921 6281 Fax: 709 921 6255
Email: maryshbr@nf.aibn.com

January 25th, 2022

NL Hydro
Hydro Place, 500 Columbus Drive
P.O. Box 12400
St. John's, NL A1B 4K7

Attention: Ms. Jennifer Williams, President and CEO

Dear Ms. Williams:

Thank you so much for the opportunity to meet with you and your group on Thursday, January 20, 2022, to discuss the future supply of electricity to residents/businesses of Southeastern Labrador.

The Town Council of Mary's Harbour would like for NL Hydro to take some time to consider where the world is going in terms of 0 emissions by 2030 or 2040 before seeking approval from the Public Utilities Board (PUB) to construct a super diesel plant in the area of Southeastern Labrador.

We believe that NL Hydro is making this decision without ALL the necessary information regarding other forms of clean power, the actual costs of providing alternate power, and without the proper input from local residents and businesses. As you know, we are in the middle of a pandemic and virtual meetings with 5 or 6 individuals from each Town is not adequate representation and more input should be acquired. We feel that the super diesel plant is a decision/option that is being made because Charlottetown is receiving its electricity from mobile generators since the fire at the local NL Hydro Diesel Plant. Surely a new plant could have been constructed since the fire and more time and consideration given to a clean form of energy going into the future.

After reviewing the Hatch Engineering Report regarding the Labrador Interconnection Options Study, we are left with many questions regarding the option that NL Hydro has proposed to the PUB:

1. Why was there was no consideration to bring the power back across the Strait of Belle Isle to provide clean energy to the Labrador Straits and Southeastern Labrador?
2. In the Report it states that Southern Labrador could be connected to Churchill Falls or Muskrat Falls with a 69-kV line, but in NL Hydro's submission to the PUB they are quoting a connection to Central Labrador via a 138 kV transmission line at a cost of $400 million. Can the connection be made with a 69 kV line?
3. What would be the cost of connecting with the 69 kV line as opposed to the 138 kV line?
4. What would be the cost of the 69 kV line construction and operation (including diesel back up) vs the super diesel plant (including operation and fuel costs)
5. Environmental considerations must be carefully examined..."super" diesel vs. renewable energy options.

As stated many times prior, the Town of Mary's Harbour has committed to ensuring we are doing our part in terms of making our community greener – ie. partnering with renewable energy companies, recycling, abolishment of plastic bags (long before the Provincial Government made it mandatory), installation of used oil collection tank, etc. We DO NOT support nor do we want to provide our community with diesel generated power into the future.

It is our understanding that there is federal funding available to help private enterprises start/expand renewable energy projects in this area. We talked about this briefly in our meeting with you and we would like to continue talks with indigenous groups and others that have a vested interest in reducing our carbon footprint. Maybe there is a way to provide a steady, reliable energy source, reduce emissions caused by diesel generators, AND it won't cost NL Hydro (the NL taxpayers) over $70 million?

We are asking that NL Hydro construct a new diesel plant in Charlottetown in 2022 (the least cost option) and take the time to explore the most affordable options for clean energy in Labrador with extensive input from the public.

Again, thank you for the opportunity and we will be making a submission to the Public Utilities Board with concerns we have once the application resumes.

Sincerely yours,
MARY'S HARBOUR TOWN COUNCIL

Alton Rumbolt
Mayor