



Port Hope Simpson Town Council

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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