

December 13, 2021

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

Attention: Ms. Cheryl Blundon  
Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

**Re: Long-Term Supply Plan for Southern Labrador – Phase 1 – Status Update Regarding the Suspension of the Review Schedule**

On November 10, 2021, Newfoundland and Labrador Hydro (“Hydro”) provided correspondence to the Board of Commissioners of Public Utilities (“Board”) requesting that it suspend the review schedule for Hydro’s application for approval of the Long-Term Supply Plan for Southern Labrador – Phase 1 (“Application”). Hydro requested the suspension to allow for additional stakeholder engagement and consultation to ensure the greatest possible alignment and understanding among all parties. On November 16, 2021, the Board approved the suspension and requested that Hydro provide an update on the consultations and its proposal by December 31, 2021.

**Status of Stakeholder Consultation**

Since the suspension of the review schedule, Hydro has met with the NunatuKavut Community Council and Nunacor and has one additional stakeholder consultation session scheduled prior to year-end. Hydro has been in contact with the remaining stakeholders who provided correspondence to the Board regarding the proposed project, as well as the towns of Charlottetown and Port Hope Simpson, and is in the process of confirming meeting times to take place during the week of January 10, 2022. Hydro is also engaging with the federal government to discuss potential mechanisms that may provide for a range of potential future projects that might reduce reliance on diesel, including an interconnection between southern Labrador and the Labrador Interconnected System. Such an interconnection would not negate the need for the project currently proposed by Hydro, as a radial line of this length would typically be backed up by generation in the communities it serves,<sup>1</sup> and the current proposal would be the least-cost option for doing so.

Hydro’s intent for the consultation sessions is to address varying specific concerns identified by the Indigenous organizations and other stakeholders, engage in open dialogue regarding the options for long-term supply in southern Labrador and potential impacts and benefits of Hydro’s proposed approach for Indigenous organizations and other stakeholder groups, and to gather any additional feedback and input from these stakeholders. Following conclusion of the sessions, Hydro will file a

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<sup>1</sup> Hydro maintains diesel generation at the end of several long radial lines, including in Happy Valley-Goose Bay, Port aux Basques, and St. Anthony.

summary with the Board that will provide an overview of what was discussed at the sessions, including common themes and information exchanged between parties on those topics.

### **Impact of Suspension of Regulatory Review Process on Service in Charlottetown**

Hydro acknowledges that the suspension of the review schedule increases the risk of a delay in completion of Phase 1 of the southern Labrador interconnection. If Hydro's proposal is approved by the Board, Hydro will endeavour to expedite its project execution schedule to minimize the potential delay in project completion as much as possible.

The town of Charlottetown will remain reliant on the existing mobile generation until a long-term solution for supply in southern Labrador is implemented. Hydro undertook capital work in 2019 and 2020 to ensure that the mobile generation that was implemented as a temporary, interim solution is as safe and reliable as possible.<sup>2</sup> Additionally, a spare mobile generating unit has been stationed on site for ease of access should it become required. However, as noted throughout the regulatory proceeding, there remain numerous safety, reliability, environmental, and operating concerns associated with the use of the mobile generating units in Charlottetown. For ease of reference, Attachment 1 provides a summary of the risks associated with continued operation of mobile diesel units in Charlottetown which was included in Hydro's application.<sup>3</sup>

Hydro remains focused on the timely implementation of a long-term, sustainable supply solution for its customers in southern Labrador. To assist the Board in establishing the remainder of the review schedule in relation to this proceeding, Hydro will file its update on the stakeholder consultation process no later than January 31, 2022.

Should you have any questions, please contact the undersigned.

Yours truly,

### **NEWFOUNDLAND AND LABRADOR HYDRO**



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

Encl.

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

**Newfoundland Power**  
Dominic J. Foley  
Lindsay S.A. Hollett  
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<sup>2</sup> Please refer to "Charlottetown Diesel Generating Station Preparation for Winter Operation – Final Report," Newfoundland and Labrador Hydro, March 9, 2020 for further information.

<sup>3</sup> "Long-Term Supply for Southern Labrador – Phase 1," Newfoundland and Labrador Hydro, July 16, 2021, sch. 1, att. 1, at pp. 15–17, Table 3.

**Consumer Advocate**

Dennis M. Browne, QC, Browne Fitzgerald Morgan & Avis  
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**Industrial Customer Group**

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**Labrador Interconnected Group**

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### Mobile Genset Deficiencies

Category	Deficiencies
Safety	<ul style="list-style-type: none"> <li>● <b>Limited Physical Space:</b> Mobile enclosures have limited space which makes it physically demanding on operators to perform routine maintenance or operational checks. Operators are also in closer proximity to safety hazards.</li> <li>● <b>Ambient Temperature:</b> There is a potential for extreme cold or warm temperatures in the small mobile enclosures. This results in unacceptable working conditions for operators.</li> <li>● <b>Noise:</b> Mobile gensets can be a loud environment given their limited space and inability to dampen sound.</li> <li>● <b>Lack of Fire Protection:</b> Hydro’s mobile gensets are not equipped with fire protection systems. Additional sheltered space would be required to install a suitable fire suppression system.</li> <li>● <b>Arc-Flash Hazards:</b> The arc-flash boundaries associated with electrical equipment in the mobile genset extend beyond the mobile enclosure.<sup>1</sup> Completely avoiding the arc-flash hazard could require an extended outage of the unit to de-energize the electrical equipment. A maintenance switch could be utilized to change the protection coordination and thereby reduce the arc-flash boundary but this introduces the possibility of more unnecessary unit trips potentially leading to customer outages. In normal operation, the arc-flash levels exceed that of any available arc-flash personal protective equipment (“PPE”), and while in “maintenance mode” PPE still may be required. This is not practical given the ambient temperature and limited space in the mobile enclosure.</li> </ul>

<sup>1</sup> The arc-flash boundary for Unit 2088 at Charlottetown is approximately 14 feet at minimum generation levels, reducing to 1.5 feet in maintenance mode.

Category	Deficiencies
Environment	<ul style="list-style-type: none"> <li>● <b>Additional Emissions Technology:</b> It is expected that long-term operation will require more stringent control of emissions. Required technologies could include diesel particulate filters and more advanced emissions and Nitrogen Oxide (“NOx”) control equipment. NOx control system equipment for selective catalytic reduction and its associated storage for injection fluids could also require additional space. Mobile gensets would not have the necessary space to accommodate this equipment.</li> <li>● <b>Lower Fuel Efficiency:</b><sup>2</sup> Mobile gensets have a greater station service requirement due to the lack of control over their auxiliary equipment (e.g., fuel pumps, radiator fans, etc.) and the electric heat requirements for offline units during winter months.</li> <li>● <b>Less Renewable Energy Penetration:</b> Mobile gensets have basic controls that are not designed for the optimization of renewable energy penetration. The necessary control infrastructure to maximize renewable penetration would require its own enclosure, given the lack of space inside the mobile genset.</li> <li>● <b>Higher Probability of Fuel Spills:</b> A site configuration with solely mobile units would be more prone to fuel spills. With an onboard fuel storage solution for each mobile genset (e.g., day tank), there are more points of failure. The prudent solution would be a metered fuel system with a common certified day tank in a dyke. Due to the limited space, mobile enclosures could not support the appropriate day tank configuration and the control panel and fuel pump would have to be installed in a separate building.</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>● <b>Winter Operation:</b> Hydro has experienced the failure of mobile gensets due to the intake of snow during blizzard conditions. Without indoor installation of the mobiles, this remains a risk. Power cables running on the ground between units and on-site facilities are also subject to the freeze-thaw cycle which could adversely affect the integrity of the cables. In comparison to a diesel generating station, it would be difficult to provide the same level of reliability without situating mobile units in an enclosed building. Since the fire at the Charlottetown Diesel Generating Station, there have been some minor upgrades completed in an attempt to minimize these reliability concerns until the execution of long-term solution.<sup>3</sup></li> <li>● <b>Limited Protection and Control:</b> Mobile gensets have limited protection and controls and are, therefore, less reliable.</li> <li>● <b>Lack of Condition Monitoring:</b> Hydro’s existing mobile gensets lack adequate monitoring functionality and data is not retrieved and archived. The collection of operational data is essential for troubleshooting and planning purposes.</li> <li>● <b>Reduced Reliability due to Adverse Conditions:</b> The intense heat and vibration associated with a mobile genset makes them more susceptible to failures.</li> </ul>

<sup>2</sup> Data shows an increased station service load at the Charlottetown Diesel Generating Station since the fire.

<sup>3</sup> Please refer to proposal, “Charlottetown Diesel Generating Station Preparation for Winter Operation – Final Report,” Newfoundland and Labrador Hydro, March 9, 2020.

Category	Deficiencies
Operation and Maintenance ("O&M")	<ul style="list-style-type: none"> <li>● <b>Increased Outages for Maintenance:</b> Mobile gensets must be offline for some routine maintenance due to limited space in their enclosures. This increases the number and duration of unit outages.</li> <li>● <b>Off-Site Maintenance:</b> A significant amount of planned/unplanned maintenance or repair to a mobile unit would require relocation to the nearest suitable shop. This could be challenging depending on weather and road conditions. Mobile gensets are not easily transported and the disconnection process can be time consuming (e.g., fuel lines, service conductors, control wiring, fire hoses, exhaust stacks, radiators, etc.). Hydro also lacks the appropriate moving and transportation equipment in this region to accommodate the relocation of a unit. Any off-site work (e.g., overhauls) would likely be prove more costly than on-site work. Due to the requirement for off-site work, mobiles gensets must be road worthy, registered, and insured.</li> <li>● <b>Reduced Productivity:</b> Due to accessibility issues and other challenges, routine maintenance in a small mobile enclosure tends to be more time consuming and costly.</li> <li>● <b>Winter Operation:</b> The operation of multiple mobile units would be much more difficult during extreme winter conditions. Additional snow clearing would be required to ensure operators can navigate safely and quickly between units and on-site facilities.</li> <li>● <b>Standardization:</b> Mobile gensets tend to be more customized and utilize non-standard equipment/parts, which increases the requirement for training and vendor-performed maintenance. Non-standard parts may also be harder to obtain and additional stock would be required.</li> </ul>