Q. Further to the response to PUB-NP-101, although Newfoundland Power appears to downplay the importance of an accurate peak forecast, what are the implications of underforecasting peak for Newfoundland Power's operations?

A. Newfoundland Power forecasts its peak demand to estimate its expected purchased power costs from Newfoundland and Labrador Hydro ("Hydro"). More specifically, its 2025 and 2026 forecast peak demand are used in determining the Company's 2025 and 2026 revenue requirements proposed in its *2025/2026 General Rate Application*. As such, a reasonable peak demand forecast is important to Newfoundland Power.

The Company has demonstrated the importance of an accurate demand forecast in the following ways:

- In 2021, Newfoundland Power undertook a review of its peak demand methodology. Based on the review, the Company changed its 15-year system load factor methodology to a five-year approach.[1] The change was made to better recognize more recent system conditions. If this change in methodology was not made, the Company's 2025 and 2026 peak forecast would be approximately 40 MW lower in each test year.

- For its 2025 and 2026 test year peak forecasts, the Company has adjusted its five-year system load factor to remove the 2020-2021 winter season, which was impacted by the COVID-19 pandemic.[2] If this adjustment was not made, the Company's 2025 and 2026 peak forecast would be approximately 20 MW lower in each test year.

- The Company studies potential impacts on its peak demand, in part, to determine if any further adjustment to its peak forecast is necessary. For example, Newfoundland Power undertook a Heat Pump Load Study to evaluate the impact heat pumps may be having on its peak demand. The study provided that heat pumps continue to generate savings in peak conditions.[3] As such, the Company has not made any adjustment to its peak forecast related to heat pumps.

Newfoundland Power has also demonstrated that it is important to the Company to manage peak demand.

- Through the continued implementation of conservation and demand management ("CDM") initiatives, customers are forecast to achieve peak demand savings of 68 MW by 2025.[4] For context, in Efficiency Canada's 2022 Scorecard, Newfoundland and Labrador (based on Newfoundland Power's performance)

[1] The Company outlined its methodology changes in its *2022/2023 General Rate Application*.
[2] See the response to Request for Information PUB-NP-090.
[3] See Attachment A to the response to Request for Information PUB-NP-093.
[4] See the *2025/2026 General Rate Application, Volume 1, Section 2.2.4 Conservation and Demand Management* for further information.

ranked fourth out of 11 jurisdictions for capacity savings as a percentage of peak demand.[5]

- Newfoundland Power and Hydro have engaged Posterity Group, an economic and engineering consulting firm, to conduct a potential study that will, among other things, examine opportunities for demand response and energy efficiency for the Island Interconnected System to provide reductions to system peak.

- Newfoundland Power is conducting a pilot project to investigate measures for managing the load of electric vehicle charging.

- The Company has increased the level of peak reduction that can be achieved through its Curtailable Service Option.[6] Newfoundland Power is also in discussions with Memorial University on a capacity assistance agreement associated with its electric boilers.

Newfoundland Power also believes it is important to recognize the variability that can occur in peak demand, as well as the circumstances that led to any greater variance in actual peak demand.

- Peak demand is typically driven by a period of extremely cold weather and normally occurs in the morning or early evening. Peak demand varies annually depending on timing and weather conditions.[7]

- Over the past 20 years, the Company's system load factor has increased from the previous year 11 times, and decreased from the previous year nine times.[8]

- In the 2022-2023 winter season, there was a relatively large forecast variance compared to actual peak. As outlined in the response to Request for Information PUB-NP-157, the 2022-2023 winter season provided for a historically low system load factor, which could not have been reasonably anticipated.

If peak demand is lower than forecast in a given year, then the Company could incur financial losses of up to $500,000.[9] Newfoundland Power therefore endeavours to

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5 See *Electricity Canada, 2022 Canadian Energy Efficiency Scorecard*, Table 13. Retrieved from https://www.scorecard.efficiencycanada.org/wp-content/uploads/2022/11/2022-Canadian-Energy-Efficiency-Scorecard-English.pdf. There was no scorecard completed for the year 2023.

6 During the 2015-2016 winter season, the average load curtailed by Curtailable Service Option participants was 10.4 MW. During the 2022-2023 winter season, the average load curtailed by Curtailable Service Option participants was 12.4 MW.

7 Hydro and Newfoundland Power have agreed on a weather normalization mechanism for use in the application of the demand-energy rate. While the weather normalization mechanism generally provides reasonable estimates of adjustments related to weather, it does not (and cannot) eliminate uncertainty with the expected level of peak demand.

8 See the response to Request for Information PUB-NP-157.

9 Based on the proposed Demand Management Incentive Account threshold of ±$500,000, effective January 1, 2025.

forecast a reasonable peak demand in a manner that does not increase the risk of incurring this cost.

There are no large implications with respect to the Company's system or capital planning. For reliability and resource adequacy purposes, Hydro has its own system peak forecast for Newfoundland Power. For the Company's system and capital planning, more granular peak forecasts are used to assess the need for investments to address load growth and overload conditions.[10]

[10] As examples: Newfoundland Power maintains an infeed load forecast which provides, effectively, an "area level" demand forecast. This forecast is provided to Hydro. The Company also completes substation transformer forecasts for each of its substations and feeder peak forecasting for each of its feeders to assess the need for investments to address load growth and overload conditions.