

1 Q. It is understood that Hydro has produced a “*conservative*” load forecast for NP which is 40 to 50
2 MW higher than the peak demand forecast provided by NP. Please confirm or deny the accuracy
3 of this statement and provide the rationale. How much double or triple counting is arising when
4 Hydro uses this more conservative load forecast along with a P90 forecast for determining the
5 need for incremental resources when the P90 forecast is already incorporated in its system
6 modelling of LOLE? Would it not be better to inform the Board of the expected scenario and
7 provide a number of what-if scenarios to present a clearer picture of the near-term resource
8 situation and enable the Board to make more informed decisions?

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11 A. Newfoundland and Labrador Hydro (“Hydro”) confirms that it has prepared a forecast for
12 Newfoundland Power that is 40 to 50 MW higher than the forecast provided by Newfoundland
13 Power.

14 Both Hydro and Newfoundland Power independently prepare load forecasts of the
15 Newfoundland Power System, each with its own methodology and models and each with its
16 own set of assumptions and economic drivers. Historically, peak demand forecasts prepared
17 independently by Newfoundland Power and Hydro were more closely aligned.

18 The Newfoundland Power forecast methodology for peak demand is dependent on its forecast
19 of system energy, with the peak demand forecast derived through the application of a historical
20 average load factor that is calculated from historical weather normalized data. The load factor
21 method implicitly assumes that overall system energy changes in the forecast period will result
22 in proportional demand changes. Newfoundland Power’s forecast for peak demand mirrors its
23 current outlook for energy sales, which are forecast to decline in 2020 and remain relatively flat
24 for the next five years.¹

¹ In Newfoundland Power’s most recent peak demand forecast, it has been assumed that the energy usage decline that results from customers converting from baseboard electric heating to a heat pump will also provide a comparable peak demand decline. There is material uncertainty in the validity of the assumption as Newfoundland Power has not yet completed its heat pump study which will include an analysis of peak demand effects.

1 Hydro's forecast methodology for peak demand relies on a statistical regression model to
2 predict demand. In its peak demand forecast, Hydro has made allowances for the conservation
3 impacts from increased heat pump installations to reflect lower peak demand savings than
4 energy savings. Hydro considers this to be an important consideration in the utility peak
5 demand forecast until the demand impacts from heat pump installations are better understood
6 and quantified. The allowances made by Hydro for increased heat pump installations have
7 contributed to the higher forecast peak demand than that in the forecast provided by
8 Newfoundland Power.

9 Hydro considers both peak demand forecasts to be within the range of possible outcomes but
10 considers the higher demand forecast from its internal models to be a more conservative
11 approach with a lower degree of risk when assessing near term resource adequacy.

12 Hydro acknowledges that a review of both Hydro's and Newfoundland Power's forecast
13 methodology would help to assess changes within the Island Interconnected System and the
14 resultant implications on peak demand. Initial discussions were held with representatives from
15 both companies on July 8, 2020. Hydro is continuing to perform quantitative analysis on both
16 forecasts and will provide this information in its 2020 Update to the Reliability and Resource
17 Adequacy Study.

18 Hydro has proposed to use a P50 forecast to determine the timing of new resource additions;
19 therefore, a conservative load forecast is not combined with a P90 forecast for determining the
20 need for incremental resources.

21 Hydro incorporates weather variations in its reliability modelling using load forecast uncertainty,
22 as detailed in the Section 5.2.3 of the 2019 Reliability and Resource Adequacy Study. As both
23 peak demand forecasts are prepared on a P50 basis, it is appropriate to apply the same load
24 forecast uncertainty distribution.

25 As part of the Reliability and Resource Adequacy 2018 Filing and 2019 Update, Hydro provided
26 sensitivity load forecasts for the consideration of the Board of Commissioners of Public Utilities
27 and parties. Hydro believes that these sensitivities present reasonable forecasts of potential

- 1 system capacity and energy requirements for the parameters considered, including a range of
- 2 electricity rates and provincial economic outlooks.