

1 Q. **Transmission Operations**

2 The response to PUB-NLH-153 states that Hydro develops three forecasts based on
3 geography, one of which is for the Avalon Peninsula. Is this forecast for the entire
4 load on the peninsula, including Newfoundland Power, or just Hydro's load? If it
5 includes Newfoundland Power's load, how is this forecast integrated with any
6 forecasts generated internally by Newfoundland Power?

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9 A. Hydro's response to PUB-NLH-153 describes Hydro's short term load forecasting
10 using the Nostradamus software package. The Ventyx Nostradamus model is used
11 for short term (one to seven day) load forecasting with an hourly time step. Three
12 forecasts are created, one for the Avalon Peninsula, one for the Hydro System, and
13 one for the Interconnected Island System. Nostradamus is a neural network
14 algorithm which learns the pattern of load changes from weather variables, day of
15 week, time of day, etc., by learning from historical data. The forecast is used by
16 System Operations to assist in determination of generation reserves, unit
17 commitment and scheduling, and equipment outage assessments.

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19 The forecasting model for the Avalon Peninsula forecasts total load, not just the
20 Hydro supplied load. The total Avalon load is the sum of the following:

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- 22 • The load on transmission lines TL203 and TL237 into the Western Avalon
23 Terminal Station;
- 24 • Holyrood generation;
- 25 • Hardwoods generation;
- 26 • Newfoundland Power's (NP's) Avalon Peninsula generation; and

- The generation at the Fermeuse wind farm.

Hydro's portion of the Avalon load is estimated by subtracting the previous day's hourly NP Avalon generation, which is used as an estimate of the present day's generation, from the total Avalon load estimate.

NP does not provide short-term load forecast information to Hydro. Longer-term load forecasting information provided by NP was discussed in Schedule 3 of A *Review of Supply Disruptions and Rotating Outages: January 2-8, 2014, Volume II*, dated March 24, 2014.