NEEDS FOR AND ALTERNATIVES TO (NFAT)

Manitoba Hydro Undertaking #44

Manitoba Hydro to explain why its historical accuracy doesn't align with the probabilistic analysis presented in Exhibit 103.

Response:

The historical accuracy and the probabilistic analysis involve undertaking two separate mathematical calculations as part of the overall load forecasting process. The historical accuracy and the probabilistic analysis are used for different purposes and do not have to align as suggested in the undertaking.

The probabilistic analysis is based on the historical load variation year-to-year and represents expected future load variation. The probabilistic analysis projects future variability of the load due to potential changes in population growth, economic growth, changes in the operations of Top Consumers, and overall use patterns. Exhibit 103 provided three additional examples of probabilistic forecasts that provide different probability point assumptions. A 10% and 90% probability of occurrence is used as a proxy for a higher and lower scenario for risk analysis and the information is provided for consideration in the resource planning process.

The historical accuracy figures are simple calculations of the accuracy of a number of forecasts at only two points in time for each forecast and provide feedback on the general accuracy of past forecasts for only those points in time. The Forecast Accuracy Table presented on page 48 of the 2013 Electric Load Forecast (Appendix E of the submission) presents the accuracy of a number of forecasts at 5 years and at 10 years for each forecast. By nature of the calculations, the data in the Forecast Accuracy Table is expected to reflect periods of high growth and of economic recession and depict comparable patterns within the accuracy tables. As such, it is expected the accuracies may approach the outer bounds of the targeted 1% accuracy per year metric for a number of coincident years subsequent to a higher growth or economic recession period within the Forecast Accuracy Table. The historic accuracy analysis is used as a feedback mechanism to assess the general accuracy of Manitoba Hydro's load forecasting methodology recognizing ongoing changes are being made to the methodologies as deemed appropriate.