

PUB-NLH-058

Island Interconnected System Supply Issues and Power Outages

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1 Q. Further to the response to PUB-NLH-010, attachment #2, explain what action Hydro
2 has taken in response to Manitoba Hydro International's statement that "*Best*
3 *utility practices would incorporate end-use modeling techniques into the forecasting*
4 *process so that electricity growth can be quantified for all major domestic end-*
5 *uses*".

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8 A. In response to Manitoba Hydro International's comments, Hydro reviewed its past
9 decision regarding using econometric modeling versus end-use modeling.

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11 In the early 1990's Hydro experimented on a trial basis with the use of an end-use
12 forecasting model that had been developed for the provincial Department of
13 Energy in the 1980's. Over the time frame in which Hydro used this end-use model
14 it became evident that a much greater level of analytical effort was required to
15 maintain this modeling approach compared to the traditional econometric
16 approach being used. This was due to the additional customer end-use data detail
17 required for forecasting end-use loads. In addition, it was perceived by Hydro at
18 that time that end-use forecasting required a significant level of judgement with
19 respect to future efficiency levels of end-use equipment that was not required with
20 an econometric approach as the econometric forecasting approach could estimate
21 overall efficiency changes from the historical data it relies on.

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23 Due to operating cost considerations during the 1990's Hydro chose to discontinue
24 adopting an end-use forecasting approach and instead continued to develop its
25 econometric approach to load forecasting.

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1 In its current econometric approach to its energy and peak demand forecasting,
2 Hydro accounts for the most significant end-use on the Island Interconnected
3 System which is electric heating. Both the energy and peaks loads experienced on
4 the Island system have been dominated by this single end-use for the past two
5 decades or longer and with the continued preference for electric heat by domestic
6 customers it is not expected to change in the longer term.

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8 For the reasons outlined above and the additional points provided below, Hydro has
9 chosen at this time to continue to forecast energy and demand requirements using
10 its existing econometric approach. Manitoba Hydro International had the
11 additional observations on Hydro's current practice:

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- 13 • Manitoba Hydro International concluded in its review of Hydro's peak
14 demand forecasting performance that in the last ten years, the NP system
15 peak demand forecast, which is the most important component of Hydro's
16 system peak demand, has performed exceptionally well;
- 17 • Manitoba Hydro International indicated, *"The additional detail required to*
18 *prepare an end-use forecasting methodology may improve forecast*
19 *accuracy, but increased accuracy is not guaranteed because any forecast is*
20 *dependent on the accuracy of the assumptions on which it is based."*; and
- 21 • The majority of customer end-use loads that would be forecast with an end-
22 use forecasting approach reside in NP's service territory and are not Hydro's
23 customers.

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25 As part of Hydro's ongoing review being undertaken by Ventyx, an assessment of
26 Hydro's load forecasting processes will be completed and Hydro will be considering
27 an end-use model further within the current review.