

May 29, 2008

Brian Rivard
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RE: Written input on MPWG Issue #9: Peak versus Average Demand Forecast in Pre-Dispatch

Dear Mr. Rivard:

I am writing in response to the IESO's request for stakeholder input on Market Pricing Working Group (MPWG) Issue 9: Peak versus Average Demand Forecast in Pre-Dispatch. Bruce Power participated in the discussions of this issue at the MPWG and appreciates the opportunity to provide our written input.

As Bruce Power has repeatedly stated in our written submissions we strongly support the continued evolution of the Ontario electricity market and incremental improvements to the real-time price. In this respect, Bruce Power supports moving to an average demand forecast in pre-dispatch because the change:

- I. Represents an improvement in market efficiency which Bruce Power thinks has been understated in the IESO's analysis, and
- II. Reduces Surplus Baseload Generation events and the likelihood of manoeuvring nuclear units.

I. Reported Improvement in Market Efficiency is Understated

The IESO's analysis of this issue indicates that moving to an pre-dispatch average demand forecast in selected hours would result in an annual increase in efficiency of approximately \$3.4 million. Bruce Power feels that the efficiency gain presented by the IESO is understated as the IESO's analysis did not include the impact of an average demand forecast in pre-dispatch on the commitment of generators in Ontario¹.

Generator commitments take place utilizing two cost guarantee programs: day-ahead generator cost guarantee and spare generation on-line. Both of these programs utilize a peak demand forecast to determine which generators are committed and receive cost guarantees².

¹ These impacts were discussed at the MPWG when developing the analysis methodology. The decision was made to not include them in the efficiency analysis due to formidable technical challenges and leave them to a qualitative discussion.

² DACG uses results from the pre-dispatch of record and SGOL uses results from the three-hour ahead pre-dispatch. Both of which currently use a peak demand forecast.



Using a peak demand forecast results in an over-commitment of generation as resources are scheduled to meet the highest possible demand for the upcoming hour. For periods where the actual demand is less than the forecast of peak demand the generator committed using a peak demand forecast is operating inefficiently. The over-commitment results in inefficient exports from Ontario and an increase in cost guarantee payments.

Due to technical limitations the IESO's analysis focused primarily on the inefficiencies of over scheduling imports. The inefficiencies that arise from the over-commitment of generation are as significant as the inefficiencies associated with over scheduling imports. When an import is scheduled it is scheduled for a single hour and the inefficiencies associated with that import only persist for the hour. When a generator is inefficiently committed the inefficiencies may occur over the entire period that the generator is online. Bruce Power thinks that these additional inefficiencies should be considered by the IESO when deciding to implement an average demand forecast in pre-dispatch

II. Reduction in Surplus Baseload Generation Events

Since market opening Surplus Baseload Generation (SBG) events have been rare, increasing dramatically in recent months. The IESO's operational review of the IPSP supply mix anticipates that SBG events will increase from 59 hours in 2010, to 115 hours in 2011 and 781 hours in 2012. Bruce Power has responded to dispatch instructions resulting from recent SBG events and has observed that there is an average of approximately 700 MW of imports scheduled in these periods.

The use of a peak demand forecast in pre-dispatch exacerbates SBG in Ontario by over-committing non-baseload domestic generators and over-scheduling import transactions at a time when demand is low. Moving to a forecast of average demand in pre-dispatch will reduce the number of imports scheduled and reduce the over-commitment of non-baseload generation in off-peak hours. This would reduce the occurrence of SBG in Ontario.

Each time a nuclear unit responds to an SBG event there is heightened risk of a forced outage. This exposes the Ontario electricity system to an unnecessary reliability risk and has obvious commercial consequences for Bruce Power. These commercial consequences are shared by the consumers of the province. If responding to an SBG dispatch results in a forced outage to a Bruce unit inexpensive nuclear supply will be replaced with relatively expensive imports for the duration of the outage. Forced outages to nuclear units last for a minimum of 48 hours. In this regard the interests of Bruce Power and the consumers of Ontario are closely aligned.

Due to the expected increase in SBG events and the associated impacts to reliability and market efficiency Bruce Power requests the MPWG to open a new issue to investigate using an alternate demand forecast in off-peak hours when there is a significant risk of SBG. The use of a demand forecast lower than average will reduce the occurrence of SBG events and has the potential to increase efficiencies in off-peak hours and when demand is decreasing. Bruce Power is committed to studying this new issue with the IESO and the members of the Market Pricing Working Group



Bruce Power's Recommendation

The IESO's analysis states that moving to an average demand forecast in pre-dispatch will result in efficiency gains in all hours. In an effort to optimize market efficiency Bruce Power prefers moving to a pre-dispatch average demand forecast in all hours. Recognizing the IESO's reliability concerns Bruce Power supports the IESO using an average demand forecast in all off-peak hours and when the real-time supply cushion is greater than 5%. Bruce Power requests the IESO to conduct a review of the use of an average demand forecast in six months to assess the impacts on reliability. If there are no adverse reliability impacts Bruce Power supports moving to a pre-dispatch forecast of average demand in all hours. Adopting this change in all hours would increase the efficiency of the Ontario market and reduce occurrences of Spare Baseload Generation events. Bruce Power recommends implementing the change as soon as practicable to fully realize the benefits of these efficiency gains.

Bruce Power looks forward to continuing its work with the IESO and the Market Pricing Working Group to improve the electricity market in Ontario.

Please feel free to contact me if you have any questions or concerns.

Yours truly,

Chris Loughren
Market and Regulatory Affairs Advisor
Bruce Power

cc: Richard Horrobin, Vice-President, Bruce Power, Power Marketing