

Submissions  
Electricity Authority  
PO Box 10041  
Wellington, 6143  
New Zealand

18 August 2015

Dear Sir/Madam

**RE: Consultation Paper - Shortened gate closure and revised bid and offer provisions**

The purpose of this letter is not to comment on suggested policy changes or the functioning of the electricity market, rather to correct a factual error which some components of the policy appear to be based on. In particular I reference Section 7, subsection 2.7.1 of the consultation paper which states:

*“Clause 13.17(3) provides that each intermittent generator must revise offer quantity during the two hours immediately before the trading period to comply with clause 13.9(b) (which says an offer must not exceed the generator’s reasonable estimate of the quantity of electricity capable of being supplied). Each revised offer must be based on a persistence model using actual output from the intermittent generating station at the time the revised offer is submitted, unless otherwise agreed with the Authority. The reason for this provision is that the Authority considers persistence-based forecasts will be more accurate than forecasts based on other methodologies (eg, based on wind speed forecasts by weather forecasting services).”*

Roughly seven years ago it may have been true that a persistence-based forecast would have been most accurate out to a two hour horizon; it is not the case in 2015. For example, I draw your attention to the 2014 publication titled *Weather Matters for Energy*<sup>1</sup>, in particular, the section on “*Wind Power Forecasting*” (p. 295) and the description of systems developed for use in the United States. In this description it is stated that (p. 298) persistence-based forecasting is being limited to one hour and forecasting systems to push that back to five minutes are currently being worked on.

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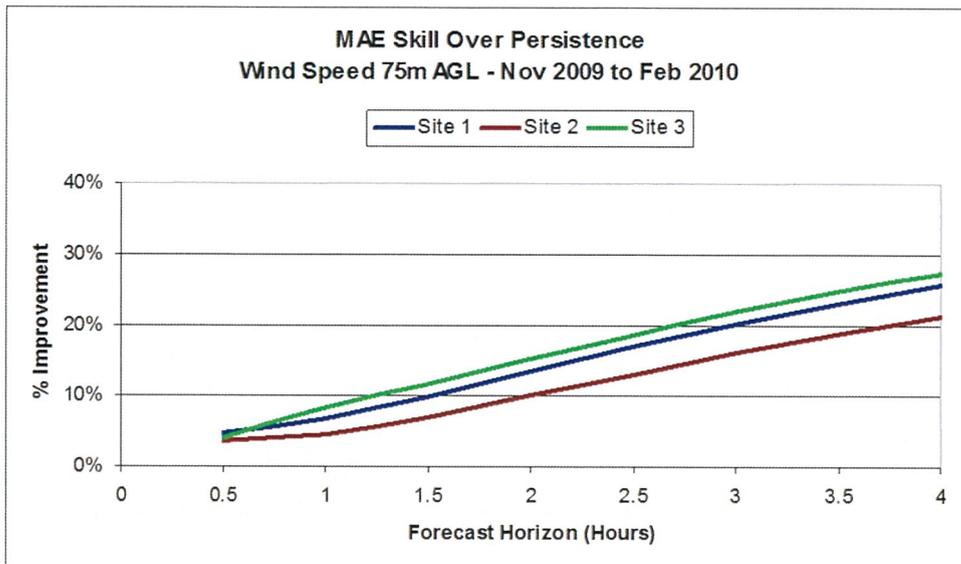
<sup>1</sup> Troccoli A, Dubus L, Haupt SE, Editors, 2014. *Weather Matters for Energy*. New York: Springer.

**POWERFUL WEATHER INTELLIGENCE**

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In 2010 MetService demonstrated, at the NZWEA Wind Integration Workshop, that even in complex terrain at a 30 minute horizon, persistence was less accurate than a purpose built forecasting system. Below is a graph showing results from that test system.



Since 2010 MetService has continued to advance its knowledge, capability and accuracy in wind speed forecasting. Not all of these advancements are reflected in the operational environment, primarily due to a lack of market demand.

It may be that there are other reasons for the grid to continue using persistence based forecasts to the 2 hour horizon. In our opinion wind forecasting accuracy should not be one of them.

Yours sincerely,

Mark Ottaway  
Deputy CEO  
Meteorological Service of New Zealand, Ltd.