

26 July 2023

Electricity Authority
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Wellington 6140

By email: forecasting@ea.govt.nz

Tēnā koutou

Review of forecasting provisions for intermittent generators in the spot market

NewPower Energy Limited (NewPower) appreciates the opportunity to submit on the Authority's review of forecasting provisions for intermittent generators in the spot market.

Our view is that while accurate forecasting is important, the cost or complexity of solutions should not create barriers to entry for new renewable generation. In the current climate emergency, it is vital that sustainable generation is built, however the ROI for many new renewable projects is borderline. The additional costs of onerous forecasting requirements may hold back the transition to a zero-carbon electricity system.

There is currently around 300MW of distributed solar generation which is increasing rapidly. There will come a time when distributed generation (DG) will need to be included in Retail and Network demand forecasts. The EA should also consider the forecasting process for distributed generation during this review.

To be successful, the benefits of better forecasting must be felt by all New Zealand. A solution that fails to deliver benefits in terms of lower power prices and carbon emissions should not be considered a success.

Please find attached Appendix 1 – NewPower's responses to questions raised in Appendix C of the Issues Paper.

Should you require clarification on any part of this submission please do not hesitate to contact me.

Ngā mihi nui

Steve Robertson
Trading Manager

Appendix 1 Submissions

Submitter	NewPower Energy Limited
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Question #	Question	Comment
Q1	Do you agree with the Authority's problem definition? If not, why not?	Yes
Q2	Do you agree that a new forecasting arrangement should apply to all grid-connected intermittent generators that are required to submit offers?	Yes
Q3	Note this question is referring specifically to generators who have thermal assets: For all trading periods between 1 November 2019 and 31 October 2022, how often do you think you made the incorrect decision whether to start or stop your thermal unit(s)? Please provide reasons why this occurred.	N/A
Q4	What else, if anything, should be considered when assessing the relative advantages and disadvantages of the four forecasting arrangements the Authority has identified?	N/A
Q5	What other types of forecasting arrangements, if any, should be considered to improve the issue of inaccurate and unreliable forecasts?	Solar forecasting is likely to be different to wind forecasting. Forecasting arrangements should keep this in mind rather than adopting a one size fits all approach. Solar has a much lower impact on peak generation due to its profile, particularly in winter. Forecasting arrangements for solar do not need the same rigour as wind generation.

Q6	Do you agree with the proposed evaluation criteria? If not, what is your view and why? Are there other criteria that the Authority should consider?	We agree with the criteria but believe it is important that the criteria chosen should promote (or at least not inhibit) transition to more sustainable generation, by not imposing significant additional cost on renewable generation.
Q7	Do you agree with the Authority's assessment of each forecasting arrangement above? If not, why not?	Yes
Q8	The Authority has not weighted the criteria based on importance. Are there particular criteria that you consider to be more important than the others?	<p>Enhances competition should be considered important, to the degree that additional compliance costs do not create a barrier to entry of new renewable generation. Similarly, value for money should have a high weighting. Any forecasting costs should be easily predictable to support business cases for new renewable generation.</p> <p>Timeliness should have a lower weighting in as much as it should not cause the dismissal of an option which creates better long-term outcomes. For the options proposed, this doesn't appear to be a decider.</p>
Q9	Are there additional criteria that the Authority should be considering?	No
Q10	How frequently do you think intermittent generation forecasts should be updated, and how often do you think intermittent generators should be required to revise their offers to reflect updated forecasts?	The authority should consider the cost vs benefit of increasing frequency. Slow start thermals require significant time to start up, so increasing the frequency will only add value where it can lead to better decisions.
Q11	Do you think the Authority should implement accuracy standards? If not, please explain why.	<p>Yes, so long as benchmarks are aligned to what is reasonably predictable/controllable by the generator.</p> <p>Where generators use their own forecasting methodology in place of a centralised model, they should be accountable for its reliability and accuracy.</p>

Q12	<p>If the Authority was to implement accuracy standards: do you think outcome process standards would be more effective?</p> <p>should there be a single standard or multiple standards across different timeframes?</p> <p>should the standard(s) be focused on ensuring actual generation is within 30 MW of the amount that was forecast, or should the MW compliance threshold be higher or lower?</p> <p>should the accuracy standards be based on the percentage of installed capacity rather than a certain amount of MW?</p>	<p>As weather is unpredictable – we favour process standards.</p> <p>Multiple standards should be applied across timeframe as weather forecasts become more accurate.</p> <p>Accuracy standards should be relative to the installed capacity rather than a fixed MW value to future proof the code and make it agnostic to the size of generation providers.</p>
Q13	<p>Following the 9 August 2021 grid emergency, reports from two investigations recommended that the Authority amend the Code to disallow persistence forecasting and require wind generations make more accurate offers to the system operator about supply. Do you agree that the Authority should amend the Code to disallow persistence forecasting?</p>	<p>We have insufficient knowledge and experience in wind generation forecasting to comment.</p> <p>Solar is unlikely to contribute to security of supply issues during winter peak. Unless a better forecasting methodology can be proposed persistence forecasting should continue to be used.</p>
Q14	<p>Do you think the Authority should implement accuracy incentives and/or penalties for non-compliance? If not, please explain why.</p>	<p>We favour process standards and believe that where failure to follow process results in significant market impact, a penalty should be introduced.</p>
Q15	<p>If the Authority was to implement a decentralised forecasting arrangement, do you have any suggestions for what type of incentives could be applied?</p>	<p>If process standards become part of the audit process, the incentive of having/following the right process will be recognised by audit requirements.</p> <p>In a decentralised forecasting model, reimbursement of (a reasonable level of) forecasting costs where forecasting meets accuracy targets would be a strong incentive to get this right.</p>

Q16	<p>If the Authority was to implement a centralised forecasting arrangement: a) do you have any suggestions for what type of incentives could be applied? b) should penalties for not meeting the standard(s) be prescribed? c) should penalties be higher for over generating than under generating (or vice versa)?</p>	<p>A centralised forecasting arrangement could be recognised with financial incentives for meeting certain performance goals in forecasting – with the added value being given to thermal generators, incentives could be funded by this part of the industry.</p>
Q17	<p>Do you have a view on who should have responsibility for submitting forecasts and who should pay for forecasting?</p>	<p>As the country is focused on reducing emissions and promoting renewable generation, and the entire industry (and country) will benefit from enhanced forecasting, increased forecasting costs should be spread across the industry by way of fees or levies, rather than being borne solely by renewable providers.</p> <p>The other contributor to peaks is the load forecast, which is performed by the system operator. The cost of this is spread across the industry via fees/levies, so applying a similar approach to generation forecasting keeps consistency.</p>
Q18	<p>Do you have a view on what types of information should be published and what platform it should be published on?</p>	<p>Any forecasting information should be easily accessible and able to incorporate into systems for dispatchable generation (e.g., via API) to assist with generation decisions.</p> <p>We recommend that Network Demand forecasting be included in the same dataset, including distributed generation forecasts so that a Net Grid Demand position is included to provide better visibility of DG growth and seasonal profiles.</p>