

Price discovery in a renewables-based electricity system – options paper

NZ Wind Energy Association Submission

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Submissions
Electricity Authority

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Introduction

1. The New Zealand Wind Energy Association (NZWEA) appreciates the opportunity to provide a submission on the price discovery in a renewables-based electricity system options paper.
2. The Association recognises the importance of the project and commends the Market Development Advisory Group (MDAG) for its work to understand how the NZ electricity system can most effectively transition to a higher level of renewable electricity generation.

Summary

3. NZWEA supports MDAG's assessment as to the importance of the wholesale market, with spot prices that signal the value of electricity, to a renewables-based future which is arriving faster than expected.
4. The Association considers that ensuring economically efficient spot and wholesale market operations with appropriate pricing and investment signals, that deliver the energy trilemma, is at the core of acting in the best interests of consumers.
5. NZWEA also supports the five key areas for future action and most of MDAG's preferred recommendations as outlined in the options paper.
6. As MDAG has noted there are a large number of proposed measures and, with finite resources, assessing the impact and complexity of implementation to optimise market effectiveness is a necessary imperative. A key risk for the EA will be ensuring the capability to implement in a timeframe that supports the speed of electricity market transformation.
7. That the measures proposed align with Electricity Authority's Wholesale Market Review and Boston Consulting Group's The Future is Electric Report is a strong endorsement of the quality of MDAG's work.

Measures to ensure reliable and efficient operational coordination

8. Addressing the capacity constraints due to the mismatch between slow start thermal and variable wind and solar generation, as identified in the winter 2023 consultation, is clearly a key priority.
9. Options A1 to A4 are supported as highest priority initiatives. The Association notes the generator CE Forum has proposed a new integrated ancillary support product to provide

longer term reserves capability. The Association supports this initiative as it may incentivise industrials to participate in demand side management.

10. The Association considers the options of offer price reductions after gate closure (A5) and investigate and develop an ahead market (A6) will require careful analysis to ensure there is an appropriate value proposition and not unintended consequences.

Ensure effective risk management and efficient new investment

11. The Association concurs that effective risk management and investment depends on the contracts market with access to contracting tools and information important.
12. An increasing number of merchant generators focusing on both onshore and offshore wind energy have entered the NZ market. Improved contracting tools and information will be important to support their development aspirations.
13. NZWEA supports a market-based approach and considers that significant hedge market development is required. In previous submissions the Association has called for:
 - The term of the hedge market to be extended from 3 years to a minimum of 5 years to provide a higher level of contract cover for merchant generators given that new generation assets are a 20+ year investment.
 - The development of new products noting that wholesale market product innovation is behind that of other markets. For example, the Australian wholesale market offers a quarterly base load cap on future products. An electricity price cap product was identified as a priority by the Electricity Authority in December 2015 however for a number of reasons has not been able to be delivered. While a cap product has a limited direct benefit to a wind farm owner it may enable a retailer to be more prepared to contract with a wind farm owner recognising the variable nature of production and having the ability to manage the absolute level of risk as defined by the cap.

14. The Association supports proposed measures B1 to B7. Market making in caps and other shaped products (B8) also has the support of the Association with a particular focus on a cap product for risk management purposes. Other shaped products are considered a lower priority but for any product development it would need to assess more fully on a cost / benefit basis recognising the scale of the NZ electricity market.

Lift participation of demand side flexibility

15. The Association agrees that demand side flexibility has significant benefits in a renewables-based system and also considers it is an underutilised opportunity in today's electricity market.
16. That demand side initiatives can play a similar role to peaking plant and the value of this capability can only increase as more variable renewables are introduced to the electricity sector.
17. Several of the proposed initiatives are about understanding current market activity and development of the necessary infrastructure (C1, C2) and investing in product development (C4) and undertaking trials (C5) are supported.
18. The backstop option (C3) should not be necessary given market competition and the Association concurs that a customer compensation scheme (C6) and negawatt scheme (C7) are not preferred.

19. NZWEA also supports improving DSF visibility (C8) and ensuring distribution pricing reflects network needs (C11) although it should be expected that distribution business would already consider this a priority.

Strengthen competition

20. NZWEA concurs that the retirement of the flexibility offered by thermal generation has the risk that competition may be thinned which underpins the Association's view that DSF development is essential.
21. MDAG's focus on conduct-based measures in the first instance with options D1 to D4 are supported noting that other market developments such as batteries and pumped hydro may increase competition.
22. The Association has commented on market making for shaped contract products (D5) in para 14.
23. NZWEA agrees that physical disaggregation (D6) and virtual disaggregation (D7) should only be considered as a back-up measure if conduct measures, better enabling DSF and new generation investment including technologies such as pumped hydro do not sufficiently address competition risks and issues.
24. It is also noted that generators face increased risks to their current business model from Government initiatives such as the NZ Battery Project so the incentive to invest and ensure the future sustainability of operations will continue to be a key factor in their hydro storage management decisions.

Increasing public confidence

25. As MDAG has noted sufficient competition, and in the Association's view, sustaining the energy trilemma is key.
26. Information on how the sector functions and actual performance including comparison to other geographies is essential. The Association supports all measures (E1 to E5) to improve public confidence.

Navigating the transition

27. NZWEA agrees that a number of MDAG's preferred options will assist with navigating the transition and reducing the risks identified - a lack of operational coordination, the premature closure of existing thermal plants and delayed investment in additional flexible resources.
28. The Association considers a lack of investment in new renewables as well as fast start thermal are key risks but are the result of differing drivers.
29. The Association, generators and many other submitters have advised of significant concerns that the proposed resource management system reforms do not sufficiently prioritise climate change mitigation and that obtaining consents to build new renewables will be more challenging than under the existing Resource Management Act. Issues with the Natural and Built Environment and Spatial Planning Bills is further addressed in the Association's submission to the Environment Select Committee.
30. As MDAG has noted the scale, location, and timing of any capacity developed under the auspices of the New Zealand Battery Project does represent a key risk to building fast start thermal capacity. It has been well signalled that the longer the uncertainty prevails the greater the risk of transition issues.

Getting the work done

31. MDAG has proposed a large number of measures to prepare the electricity market for a highly renewables future.
32. The level of change the energy sector faces is recognised as transformational and it has already been noted the renewables-based future is arriving faster than expected.
33. The Association fully supports MDAG's approach of working with stakeholders to co-design solutions.

Response to Specific Questions

1. Do you agree that, weighing costs and benefits, our preferred options in Table 7 above are likely to best address the operational coordination issues described in that chapter? If not, why not?

Yes, noting options A5 and A6 will require careful analysis to ensure an appropriate value proposition and there are not unintended consequences.

2. What is your view of the proposed sequencing and timing of measures to strengthen operational coordination?

NZWEA agrees options A1 to A4 should be progressed as a priority.

3. What, if any, other options should be considered to strengthen operational coordination?

As noted in para 9 the Association supports the generator CE Forum's proposed new integrated ancillary support product to provide longer term reserves capability.

4. Do you agree that, weighing costs and benefits, our preferred options in Table 10 above are likely to best address the risk management and investment issues described in that chapter? If not, why not?

Yes. With respect to market making in caps and other shaped products (B8) the Association's particular focus is for a cap product for risk management purposes. Other shaped products are considered a lower priority but for any product development it would need to assess more fully on a cost / benefit basis recognising the scale of the NZ electricity market.

5. What is your view of the proposed sequencing and timing of measures to improve risk management and investment?

General support however the Association would like to see market making for longer dated futures (B2) commencing earlier in recognition of the number of independent generators entering the NZ electricity market.

6. What, if any, other options should be considered to improve risk management and investment?

- None identified.
7. Do you agree that, weighing costs and benefits, our preferred options in Table 13 (should be table 12) above are likely to best address the demand side flexibility issues described in that chapter? If not, why not?
- Yes costs and benefits in table 12 broadly supported.
8. What is your view of the proposed sequencing and timing of measures to improve demand side flexibility?
- Backup options should be delayed until preferred options implemented.
9. What, if any, other options should be considered to improve demand side flexibility?
- None identified.
10. Do you agree that, weighing costs and benefits, our preferred options in Table 15 (should be 14) above are likely to best address the competition issues described in that chapter? If not, why not?
- Yes.
11. What is your view of the proposed sequencing and timing of measures to strengthen competition?
- Preferred options should be progressed ahead of supplementary option (D7).
12. What, if any, other options should be considered to strengthen competition?
- None identified.
13. Do you agree that, weighing costs and benefits, our preferred options in Table 17 (should be 16) above are likely to best address the public confidence issues described in that chapter? If not, why not?
- Yes.
14. What is your view of the proposed sequencing and timing of measures to increase public confidence?
- Supported.
15. What, if any, other options should be considered to increase public confidence?
- None identified
16. Do you agree the measures in Table 19 (should be 18) should be prioritised to help

ensure a smooth transition to a renewables-based system? If not, why?

Yes

17. What, if any, other measures should be considered to facilitate a smooth transition to a renewables-based system?

None identified.

18. Do you agree with the proposed categorisation of how measures should be progressed between Code-processes, market facilitation and hybrid approaches in Table 20? If not, why?

Broadly supported and greater industry involvement in developing options welcomed.

About the NZ Wind Energy Association (NZWEA)

- The NZWEA is an industry association that promotes the development of wind as a reliable, sustainable, clean and commercially viable energy source
- We aim to fairly represent wind energy to the public, Government and energy sector
- Our members are involved in the wind energy sector and include electricity generators, wind farm developers, lines companies, turbine manufacturers, consulting organisations and other providers of services to the wind sector
- By being a member of NZWEA you are assisting the development of wind energy in New Zealand and helping to reduce our greenhouse gas emissions to meet climate change targets.

The Association's strategy focuses on three key areas:

- Leveraging NZ's emission reduction imperative to enable the energy transition to renewables, particularly wind energy.
- Optimising wind energy's position and ensure the regulatory environment supports wind farm development.
- Expanding the opportunity for wind energy development to enable community and industrial projects including wind's integration with other technologies.

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