

Low-emissions Economy Draft Report

NZ Wind Energy Association Submission

Grenville Gaskell, CE

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Introduction

1. The New Zealand Wind Energy Association (NZWEA) welcomes the Productivity Commission's (PC) inquiry into the Opportunities and Challenges of a Transition to a Lower Net Emissions Economy for New Zealand. The Association appreciates the process the PC is following and the opportunity provide comments on the Draft Report.
2. As noted in the Association's submission in response to the Commission's Issues Paper, the absence of an integrated approach to developing a low carbon strategy and set of implementation actions has been a concern. The material level of emissions reduction required and potential cost to meet the 2030 Paris target and a longer-term net zero position warrant a specific focus.
3. The Association considers the Commission's Draft Report a comprehensive and balanced review which provides direction to support the transition to a lower net emissions economy.
4. In this submission NZWEA's focus is on the electricity sector and areas which may impact the electricity sector such as transport.

Executive Summary

5. The Association considers that it is preferable to address New Zealand's emissions footprint domestically as ultimately a net zero position needs to be achieved under the Paris Agreement. Investment should be focused on achieving this outcome for the benefit of all New Zealanders.
6. A domestic mitigation strategy also reduces the risk from relying on international carbon markets which have not yet been developed.
7. We consider, as the price of carbon increases, future competitive advantage should be able to be obtained by utilising New Zealand's natural advantages in land, water and wind resources. New Zealand has a significant potential to develop low cost renewable energy based on natural resources that are world leading. In particular our wind energy potential is well documented.
8. As an overarching comment NZWEA is supportive of the Commission's Draft Report which provides deep analysis and recommendations in each of the areas that make-up New Zealand's carbon emissions. Given the materiality of the transition we would like to see a summary of the expected impact of the low-emissions economy recommendations on growing incomes and wellbeing. This is to address the risk of carbon leakage impacting GDP given a significant percentage of current emissions support New Zealand's export sector.
9. The Association notes that transitioning to a lower carbon economy will be complex with many initiatives across the four pillars the Productivity Commission has identified. We would also like to see a recommended implementation programme developed with a prioritisation process completed for each recommendation based on impact on emissions and implementation difficulty. For example, we note that actions to increase the uptake of

electric vehicles should score as a high priority given the opportunity to significantly lower material long life carbon emissions.

10. As identified in the Draft Report, electricity is a significant input into other parts of the economy with the electrification of high carbon emitting sectors being central to a low-emissions economy. In the Association's view it is essential that in lowering electricity sector emissions the cost of electricity to consumers is managed to not disincentivise the larger opportunity from decarbonising emissions across the wider energy and other sectors.
11. The wider electrification of the New Zealand economy also represents a concentration of risk that needs to be managed to ensure the on-going reliability of supply and it is appropriate that the PC has also focused on sector adequacy.
12. The Association considers there are several areas that require attention to ensure the electricity sector is best able to decarbonise while also supporting other sectors' decarbonisation efforts. These are covered more fully in other sections of this submission and can be summarised as follows:
 - Emissions pricing - reforming the emissions trading scheme to achieve an agreed level of carbon reduction.
 - Innovation - including low emissions initiatives as a priority in innovation systems.
 - Investment support - including support for small scale community renewable electricity initiatives as part of the recommended low-emissions investment strategy.
 - Law and institutions - implementing a UK style Climate Change Act in NZ.
 - Transport – additional incentives to encourage EV uptake.
 - Electricity tariff reform - implementing service based and cost reflective retail electricity pricing.
 - Enabling distributed energy resource innovation, particularly at a consumer level, by reviewing regulatory settings.
 - Completing the review of transmission and distribution pricing to provide greater investment certainty.
 - Strengthening the National Policy Statement for Renewable Electricity Generation to provide greater recognition of the importance of renewable electricity generation.
 - Completing the Outcome Evaluation Review of the National Policy Statement on Electricity Transmission and addressing any issues identified to ensure grid development can support new renewable generation projects.
13. Current market-based regulatory arrangements for the supply of electricity have proved more than adequate even in periods of hydro shortfall. Given the importance of the electricity sector reducing emissions, and the significant expected growth in electricity demand from enabling other sectors to reduce emissions, the Association considers that addressing the areas identified are a high priority. Industry change is required to optimise existing investment, enable innovation, and ensure the full value of future investment by all participants can be understood and realised.

NZWEA Response to Draft Report Recommendations

Emissions Pricing

14. The Association has been disappointed with the management of the ETS and the absence of a strategy that links ETS policy to an emissions reduction target. Recommendation 4.1 on reforming the ETS is supported as a key decarbonisation action.
15. As noted an effective emissions price should form the centrepiece strategy to reduce emissions and create a level playing field that incentivises long term investments that lower emissions.

Innovation

16. The level of Government support for fossil fuel production and consumption detailed in the Draft Report is unwarranted, particularly as New Zealand champions the high level of renewable electricity generation that has been developed based on a purely commercial model without incentives. The recommendation to phase out fossil fuel subsidies is supported.
17. The Association also supports the inclusion of low-emission objectives in a strengthened innovation system.

Investment

18. In the Association's Brief of Evidence in support of Blueskin Energy Limited's (BEL) Environment Court Appeal we highlighted the role of small scale wind energy projects and referenced the Parliamentary Commissioner for the Environment's (PCE) 2006 Report Wind Power, People and Placeⁱ. The Association noted the importance of small scale community owned wind farms in the development of the European wind sector and that BEL was New Zealand's first such initiative.
19. The PCE Report concluded that large scale wind farms can only ever occupy a small portion of the country's wind locations. The Association also observes that distributed generation is positive for electricity sector resilience and supports the Government's regional growth agenda.
20. There are a number of challenges to community investment in renewable generation in New Zealand in addition to obtaining community support. The two key issues being obtaining the funding for feasibility studies and meeting the requirements of the Resource Management Act particularly completing environmental effects studies when seeking a consent as, to date, there has been no differentiation based on project size.
21. The Association considers that the opportunity to include funding for the investigation of small scale community renewable electricity initiatives should be evaluated as part of the recommended low-emissions investment strategy (R6.4).

Law and Institutions

22. The Association notes the long-term nature of climate change and the importance that the business community is provided with clear and consistent signals that support investment in reducing emissions.
23. NZWEA supports recommendations 7.1 to 7.12.

Transport

24. Given the rapid increase and high level of emissions from the transport sector the Association supports an increased focus on the sector particularly as it contributes one third of long-lived gas emissions.

25. The Association considers that the current range of incentives do not reflect the extent of the opportunity and supports emissions reduction in this sector becoming a stronger strategic focus (R11.60) along with the recommendations designed to build a strong EV charging infrastructure and making EV's more affordable.
26. In parallel with the EV initiatives identified, the Association considers that the timeframe for implementing service based and cost reflective retail electricity pricing needs to be accelerated to ensure:
 - consumers are offered tariffs where they can benefit from off-peak lower cost charging costs thus enhancing the EV purchase proposition.
 - electricity system efficiency and minimise new investment costs from charging EV's at off-peak demand periods to maximise the utilisation of existing infrastructure.

Electricity

27. As identified in the Draft Report, electricity is a significant input into other parts of the economy with the electrification of high carbon emitting sectors being central to a low-emissions economy. In the Association's view it is essential that in lowering electricity sector emissions the cost of electricity to consumers is managed to not disincentivise the larger opportunity from decarbonising emissions across the wider energy and other sectors.
28. Although not specifically referred to in the Draft Report, the Association favours a wider energy sector renewables target rather than focusing on achieving 100% renewable electricity in a normal hydrology year. We note that the electricity sector has, without incentives or an effective ETS, achieved an 80 to 85% level of renewable generation depending on hydrology. The Association supports the reliance on an effective ETS scheme (R12.2) and note this combined with the age of existing thermal plant and cost of renewables will lead to a higher level of renewable electricity generation. Targeting 100% renewable electricity generation, while aspirational, will result in additional consumer and industry costs which may limit the decarbonisation of higher emitting sectors.
29. The current regulatory approach and, in particular, the timeframes for decision making is an impediment to investment in capital intensive generation assets. An example of this is the EA's transmission and distribution pricing review which has been ongoing for a number of years. Transmission and distribution pricing are key variables in assessing wind farm commercial viability. With 45% of current wind capacity being connected as distributed generation unilateral changes that effect the viability of long life investments are a major concern.
30. The Association references aspects of the previous EA consultation as an indication of the material impact transmission and distribution pricing has and the risk of unintended consequences such as:
 - the proposed shift from using peak pricing signals to a capacity-based model which could have a major impact on the demand profile and better support fossil fuel based peaking generation and disadvantage renewables which, in scale with geographical dispersion, have a baseload like generation profile.
 - Changes to connection costs for distributed generation from incremental to including EDC's common costs provide a connection advantage to grid connected generation. This approach flies completely contrary to the NZ Energy Strategy's focus on supporting distributed generation, smart grid deployment and smaller scale generation technologies which are largely renewable.

31. The Association is also concerned that consumer cross subsidisation created by electricity distribution businesses (EDB) charges not being cost reflective creates a market distortion that disadvantages wind energy. Solar energy is effectively being encouraged over investment in wind energy by outdated EDB charges being bundled with energy usage. Current EDB charging does not support energy sector innovation and the proliferation of EDB's all working to separate timeframes to review pricing is a key industry risk.
32. The Association notes recommendation 12.3 on the Electricity Authority's pricing and regulation work programme and considers that increased priority should be afforded to accelerate implementation.
33. The integration of distributed energy resources (DER) whether enabling small scale generation, battery storage or demand response is key to electricity sector innovation and enabling consumers to make informed investment decisions where they understand the value of their DER investment. DER development is also considered important to supporting the future growth of renewable electricity generation and ensuring the electricity system can cost effectively support generation variability.
34. The Association also notes, in relation to recommendation 12.4 there is a need to define the scope of electricity distribution businesses regulated and non-regulated services to support competition at the retail level. We consider consumer engagement will increase with more choice and independence and that business models will need to change to become more service orientated. Consumers will play an increasing role in a more distributed electricity system and the effective integration of their investment can enhance system reliability and efficiency.
35. The Association, along with other submitters on the PC's Issues Paper, raised issues with The National Policy Statement for Renewable Electricity Generation (NPS-REG). We noted that the Ministry for the Environment's (MfE) December 2016 Report of the Outcome Evaluation on the NPS- REG was referenced for its conclusion that there had no noticeable increase in the consistency of REG planning provisions across regional policy statements or regional or district plans. The high level of variability increases the level of uncertainty for generation projects.
36. The Association supports the MfE's Review findings and considers a revision to the NPS-REG is necessary to strengthen and improve the document to provide more detailed direction and guidance on the national significance of renewable energy generation. In particular sending clearer signals to local government and the Environment Court about the significance of renewable energy and more guidance on the relative importance of renewable energy compared to other matters of national importance under Part 2 of the RMA.
37. The current NPS-REG also talks about the "upgrading of new and existing renewable generation activities" although there is a lack of definition provided.
38. Variations to existing consents can include time extensions. There are a number of wind farms consented that will shortly be lapsing. The effort required to extend consents is not insignificant and, in many cases, turbine technology has changed such that a variation to what was consented is required. The issues together currently almost force a re-consenting exercise despite the activity being "wind farming" and in most cases, a change to larger turbines having a minimal impact on existing landscape and visual effects.
39. At some point the wind industry is also going to need to replace the turbines at existing wind farms and most probably repower with larger turbines and this is likely to require a new consent.
40. A review of the NPS-REG should also consider approaches to varying current consents and repowering to ensure that there is recognition of the existing effects on the environment and that the scale of effects review is limited to the change requested. When

considering applications existing mitigation measures should be recognised and any change in effects should be considered in their entire context rather than limited to one factor.

41. A simplified and lower cost process would also be helpful to progress the development of smaller wind farm sites which by nature are capital and resource constrained.

42. MfE is currently undertaking an Outcome Evaluation Review of the National Policy Statement on Electricity Transmission (NPS-ET). The Association understands that submissions received by MfE identify significant issues with the effectiveness of the current NPS-ET.

43. The Association considers that:

- an effective RMA decision making process for electricity transmission infrastructure is a pre-requisite to enable new renewable electricity generation to be developed which is often in remote locations and requires grid development.
- That revisions to the NPS-REG and NPS-ET should be completed in parallel and as a priority to support the government’s target for renewable electricity generation.

44. The Association notes the Commission’s consideration as to whether the Electricity Authority should take emissions into account in its activities and decisions and the conclusion drawn in recommendation 12.4. While including emissions adds complexity to the EA’s role, given their responsibility as the primary industry regulator, the Association considers that should be required to consider the three aspects of cost, emissions and adequacy identified in figure 12.6 of the Draft Report.

45. Current market-based regulatory arrangements for the supply of electricity have proved more than adequate even in periods of hydro shortfall. Given the importance of the electricity sector reducing emissions, and the significant expected growth in electricity demand from enabling other sectors to reduce emissions, the Association considers that addressing the areas identified are a high priority. Industry change is required to optimise existing investment, enable innovation, and ensure the full value of future investment by all participants can be understood and realised.

Response to Specific Questions

46. NZWEA’s response to specific questions are as follows:

Q6.1	Should the investment policy of the New Zealand Venture Investment Fund be updated to identify low-emissions investments as a sector of interest?
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- As noted in para 20 and 21 the Association supports an update of investment policy for the reasons outlined.

Q12.1	Does decision making under the Resource Management Act 1991 unduly constrain investment in renewable electricity generation, particularly wind and hydro generation? In what ways could the National Policy Statement on Renewable Electricity Generation 2011 be strengthened to give clearer direction to regional, district and unitary councils to make provision for renewable electricity generation in their regional and district plans, regional policy statements and resource management decisions?
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- NZWEA supports the strengthening of NPS-REG – refer para’s 35 – 43.
- The NPS-REG needs to provide clear policy direction on the importance of renewable electricity generation as a nationally important priority.
- The Association also supports the completion of the Outcome Evaluation Review of the NPS -ET and amendments to ensure that new renewable electricity generation can be supported by an effective decision-making process for new electricity transmission infrastructure.

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.

Contact details in relation to this submission:

Grenville Gaskell
Chief Executive
New Zealand Wind Energy Association
PO Box 553
Wellington 6140
grenville@nzwea.org.nz

ⁱ http://www.pce.parliament.nz/media/pdfs/Wind_power,_people,_and_place.pdf