TRANSPOWER

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington New Zealand
Telephone +64-4-590 7000
www.transpower.co.nz

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The New Zealand Green Building Council
Level 2, Tower 1
205 Queen Street
Auckland 1010

By email: info@nzgbc.org.nz

Net Zero Carbon Buildings standard

We welcome the opportunity to submit to the Green Building Concil's counsultation *Net Zero Carbon Building's standard.*

We support the Green Building Council's exploration of building standards for a zero carbon built environment, and respond to relevant questions below.

Question 1: Do you agree with our vision for a zero carbon built environment?

Yes, this vision is consistent with Transpower's vision as portrayed in Te Mauri Hiko. We agree that to transition New Zealand to a low carbon economy, change will be required to many sectors. We, like NZGBC, have identified the built environment as an area where there is a key opportunity to facilitate the transition.

As part of our modelling we have assumed energy efficiency improvements across many areas of electricity demand, including industrial, commercial and residential sectors. This will need to include efficiency improvements in both the buildings and the activities undertaken inside them. The Net Zero Carbon Buildings Standards Consultation Paper clearly sets out a pathway for the built environment to reduce both its electricity demand and carbon emissions. We consider this an important and valuable contribution to the debate about New Zealand's future.

Question 3: Do you agree with the proposed minimum standard of energy efficiency?

Yes, improving energy efficiency will help reduce both total energy demand and peak energy demand in a zero carbon future. As stated in our response to question 1, we have assumed energy efficiency improvements across many areas of electricity demand, including industrial, commercial and residential sectors. This will serve to limit the amount of new generation required to supply the zero carbon future and help manage key challenges such as managing winter peak demand for electricity.

Question 4: Would you support ratcheting the minimum standard of energy efficiency over time?

Yes, it is important to require continuous improvement in performance and efficiency if the transition to a low carbon economy is to be made. Continual improvement is one of the enablers that will help us overcome the key challenges such as managing winter peak demand, both of which currently require the use of fossil fuel based electricity generation.

Question 5: Should an interim definition of net zero carbon require buildings to have a plan to transition away from the use of on-site fossil fuels such as gas-fired space and hot water heating?

Yes, opportunities to transition away from fossil fuels for both water and space heating and cooking will be critical for a decarbonised future. The technology to support this is already mainstream and some cities in California are already moving towards banning gas connections for new buildings. We consider such policies will be important in helping to limit future transition challenges.

Question 6: Should a definition of net zero carbon include requirements to include measures to reduce peak electricity demand?

Yes, consideration should also be given to measures that actively reduce peak demand in real-time in response to factors such as high energy prices or energy shortages. It is envisaged that future products and services will be available in the market that would allow building owners to both assist in the operation of the power system and help control and reduce their costs with limited or no noticeable impact on building occupants. Including such elements into a future building standard (either as a base level requirement or optional stretch) would encourage their uptake for the benefit of New Zealand.

Current pricing for electricity transmission includes a price signal encouraging demand reduction during periods of coincident peak demand. However, the Electricity Authority is expected to again propose removal of this signal in mid-2019. We do not support its removal and consider a peak price signal as part of the transmission pricing methodology is now more important than ever.

Question 14: Please provide your feedback on the current Australian Powered by Renewables innovation challenge and its relevance to New Zealand. In particular, we are seeking feedback on the suggested points for providing on-site renewable energy and for grid renewable power purchase agreements that are not currently available in New Zealand.

Comment. We do not believe New Zealand needs regulated Power Purchase Agreements that specifically capture certified renewable generation. Such agreements currently exist in Australia and similar instruments exist in the UK. We already have a large variety of contracts available to electricity consumers whereby they can purchase electricity, whether for a specified quantity or load following, from a specific source at a price for a specified period. This provides an opportunity for the demand side to directly purchase from renewable generation sources if they desire. And those generation sources can be certified carbon zero if they choose or the demand customer is prepared to pay an appropriate premium.

There may be an opportunity for a certification scheme to identify an electricity contract as "certified renewable". A suitable certification scheme would be more useful (and could be applied to existing contractual instruments) than introducing a new form of agreement specifically to capture certified renewable generation. However, in our view market differences between Australian (and other international contexts) and New Zealand could reduce effectiveness of the approach. Our market already has a high penetration of renewable energy and higher thermal fuel costs in New Zealand already make renewable developments more cost effective.

Yours sincerely,

Jonathan Good
Acting General Manager Strategy