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Submissions
Electricity Authority
PO Box 10041
Wellington 6143

Email to: submissions@ea.govt.nz

Regarding: Transmission Pricing Methodology Avoided Cost of Transmission (ACOT) payments for distributed generation.

To Whom it May Concern

Thank you for the opportunity to submit on the ACOT working paper.

Introduction

Wind Farm Group Ltd (WFG) is well advanced with the preliminary design and environmental investigations associated with a proposed wind farm North of Auckland. Substantial investments have been made in the project over the last ten years.

WFG also has a financial interest in the Hau uru ma raki Wind Farm which gained resourced consent through a Board of Inquiry in 2011.

WFG's interest in ACOT working paper primarily relates to the proposals in the ACOT working paper and how it relates to increasing barriers for new or smaller entrants into the generation market.

We firmly believe ACOT is an essential part of supporting a more resilient and efficient generation and transmission system in New Zealand.

We wish to draw your attention to the original reasoning for ACOT which stemmed from the 2003 MED discussion paper and subsequent underlying policies which include but are not limited to:

- competition in the generation and supply of electricity should be promoted
- there should be an investment environment that encourages small scale generation and the adoption of new electricity technologies and renewables
- local solutions to local energy needs, innovation and responsiveness to consumer demands should be encouraged
- there should be an investment environment that encourages the contribution of small scale generation to the delivery of electricity in an environmentally sustainable manner and to the overall security of the electricity system.
- The compliance costs of regulation should be minimised

Lowering barriers to entry for competition

One of the key objectives for the EA is to promote competition in the generation and retail of electricity by lowering barriers for new entrants to the generation and retail markets.

Abandoning ACOT payments has a net effect of increasing the required size of projects to become viable in order to gain economies of scale for instance through the cost of resource consents. This increases the barrier to entry substantially for new generators seeking to enter the market.

Larger projects require larger investments therefore increasing the barrier for entry for new or smaller players. This will lead to less innovation, less competition, and certainly less DG investment in particular for renewables.

Building resilience in the New Zealand electricity grid

We appreciate the comments in paragraph 8.21 with regards DG not providing total N-1 security however, this refers to only one DG asset on one distribution network. It should however take into account that any DG in its own right does provide N-1 security up till the operational capacity of the DG. Large scale Transpower connected generation assets have the same, yet larger issues and hence the requirement for backup generation on the Transpower grid.

In relation to thermal generators, in particular CCGT and coal, these assets tend to have large scale single shaft generators ranging from 48 MW to 400 MW. This is in comparison to DG which will have much smaller single unit generators ranging from 100 KW to 25[1] MW, with the majority of embedded single wind turbine generator units ranging between 2 MW and 3 MW. The largest combined DG plant of 64.4 MW[2] therefore approximates the smallest Transpower connected generators.

In addition, if we consider the benefits of all 217 DG assets across all distribution networks within New Zealand then a more holistic picture appears. The more DG provided on the distribution networks the more resilience is provided to regions and New Zealand electricity system as a whole.

Auckland Council in particular note their concern regarding resilience of energy supply into and within the Auckland region. While it recognises Auckland will continue to utilise renewable electricity provided primarily from outside the region, it emphasizes the need for renewable DG within the Auckland region in order to increase energy resilience for the region.

> *Directive 8.4 (The Auckland Plan)* [3]
> *Increase energy resilience by diversifying the location, type and scale of energy sources and fostering greater use of renewable energy resources available in the region.*

This is a reflection of policies that have been adopted by many other major cities around the globe which support DG.

[1] Norske Kog Kawerau TOPP1
[2] Te Uku wind farm
[3] http://theplan.theaucklandplan.govt.nz/aucklands-response-to-climate-change/

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The need to support more renewable investment

A number of international organisations have noted the urgent need for more investment into renewable generation to achieve less than 2 degrees of climate warming. This includes the UN IPCC, the World Bank, the IMF, and the OECD to name a few.

Insurance councils and large global hedge funds are also calling for action on reducing investments into thermal generation and increasing investments into renewable generation. Abandoning ACOT would therefore go against the international trend of supporting renewable DG in particular.

In New Zealand there is bipartisan support for 90% renewable electricity generation by 2025.

As noted in 11.14 the ETS is designed to support renewables in favour of thermal plant. However, the reality is the ETS has become ineffective in lowering emissions as the current carbon price is meaningless.

It is also recognised globally, for example, by the annual Ernst and Young Global Attractiveness Rating[4], that renewables require a number of favourable policies in order achieve emission reductions. A carbon price alone is ineffective without complimentary and supportive policies.

It is recognised therefore that a number of polices are required to incentivised renewable investment which include but are not limited to;

- Bi-partisan targets to reduce emissions
- A price on carbon
- Lowered barriers to planning and resource consent processes
- A supportive framework in relation to access to transmission assets for renewables
- Investment incentives, as compared to fossil fuel plant
- Available capital

The ETS alone is ineffective in increasing the component of renewables in the electricity generation market. This has been highlighted most recently in New Zealand over the last 24 months whereby the price of carbon has dropped from NZ$20 t/CO2 to NZ$4 t/CO2 resulting in many renewable developments being shelved or cancelled all together[5].

New Zealand ranks the 39th worst country in relation to policies supporting renewables investment attractiveness. Renewable generation, including renewable DG therefore requires continued support through targeted ACOT payments.

Investments already made in DG

WFG would like to note that substantial investments into DG have already been made into the Poutoa wind farm over the last 10 years, but in particular since 2007. It is of major concern that given all or a large part of the Poutoa wind farm would be embedded that rules around ACOT and the potential benefits that DG would otherwise receive would impact the viability of DG.

We would be happy to share these investments with the EA confidentially.

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4 http://www.ey.com/GL/en/Industries/Power---Utilities/Utilities-Unbundled---3---Rating-the-attractiveness-of-renewables-markets

5 We recognise Tiwai also has had a major impact.

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Cost to the consumer and lines losses

Given the maximum allowable rate of return that Transpower is able to achieve across all assets is fixed, we do not agree with the statement in paragraph 12.4(b) that consumers are paying $10 more per customer due to ACOT. The distribution charges may vary slightly throughout the regions however the total sum paid to Transpower nationally is the same.

Further, the more DG is constructed, the less lines losses will be achieved and therefore the higher rate of efficiency in delivering that generation to the end consumer. While line losses are incorporated into market pricing, from an electrical engineering perspective the lower the amount of losses both from a Transpower and a distributor level the better.

In paragraph 12.4(h), there needs to be recognition of benefits that renewables such as wind can provide to the distributor networks, including voltage support which is already being provided in some cases even while the wind farm is not generating[6].

Benefits of DG and Demand Side Management

If ACOT is not retained then we are unsure as to how the benefits of demand side management, such as water heater ripple control, and in the near future, electric vehicles can also be valued into the market. DG and demand side management have similar effects and benefits to distributors and Transpower.

It is important therefore to provide measures to promote innovation within the demand side and DG markets.

Conclusion

We understand the reasons for the EA to review ACOT payments.

However we disagree with a number of points by the EA made and believe ACOT is invaluable in promoting new and smaller entrants to the market and in particular smaller renewable projects to the market. ACOT therefore should not be abandoned but refined.

We do however support the concept that the EA has noted in paragraph 7.30 that DG now seems to be more prevalent in non-import constrained areas. This may not have been the case before ACOT was introduced and hence areas have become less import constrained because of it.

However, WFG generally supports the concept that ACOT should be continued in all areas but more so for renewables in import constrained or high growth areas.

Our recommendations therefore are as follows;

- ACOT payments should only be available for renewable generation, or at a lesser rate for thermal plant;

[6] For example the Te Uku wind farm.

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- ACOT payments be higher in import constrained areas or areas of projected high demand growth to incentivise DG in areas of need;

- The ACOT structure should remain in place, as a simplified payment structure versus subjective negotiations between distributors and DGs as referenced in paragraph 1.16; and

- Existing ACOT payments should be grandfathered.

Thank you again for the opportunity to submit on ACOT.

Yours faithfully
Wind Farm Group Limited

Al Yates
Managing Director