COUNTIESPOWER

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Energy Markets Policy
Ministry of Business, Innovation and Employment
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Counties Power submission

Submission on *Accelerating renewable energy and energy efficiency discussion document*

Counties Power welcomes the opportunity to submit on MBIE's 'Accelerating renewable energy and energy efficiency discussion document' dated December 2019.

Counties Power is a trust-owned electricity distribution company based in Pukekohe that services Auckland's rural southern area and the northern area of the Waikato. The Company distributes electricity to over 43,000 ICPs across a geographical region of some 2,250 square kilometres. All the shares in the Company are held by the trustees of the Counties Power Consumer Trust on behalf of all local power consumers, comprising a mix of urban, rural and commercial customers.

The uptake in renewable generation won't occur until the electricity industry has certainty over how base thermal generation will wind-down to meet the 2035 100% renewable target. This is occurring in Australia in the scheduled retirement of their coal thermal plants, while at the same time incentivising large-scale uptake of renewable generation. In comparison, New Zealand has taken no meaningful steps to reduce the country's greenhouse gas emissions and continues to reply on the historical luck of having a large hydro generation base to espouse the pure New Zealand concept.

The recommendations in the discussion document will result in a continuation of this inertia because MBIE is placing the downside economic impact risk over the need to meet carbon zero targets. Possible steps that MBIE could consider to address this include:

- Development of clear milestones for how stocks of gas and coal boilers, and thermal generators, will reduce to hit the 100% renewable target for electricity by 2035 and overall zero emission by 2050;
- Where there exists a cost-effective electrical solution for space and water heating, as opposed to a gas or coal equivalent, legislate to stop the fuel equivalent being installed. For example, around 20% of total gas consumed is in commercial and residential buildings where there is already an electrical alternative; and
- Introduce legislation to block new thermal generation and the reticulation of gas in new residential and commercial developments. Gas reticulation for industrial developments is still required given that currently there is not a cost-effective electrical option for high temperature industrial requirements.

Regarding the discussion document questions, Counties Power has had extensive experience with connecting distributed generation into a local network. Consequently, the following is in response to the section 11 questions.

1. *Have you experienced, or are you aware of, significant barriers to connecting? Are there any that will not be addressed by current work programmes outlined above?*

   Counties Power believes that there are very few barriers for small distributed generators to connect to the Counties Power network, which is reflected in the fact that very few applications to connect are not approved. However, large commercial distributed generators quickly find insufficient capacity exists on local EDB networks for their generation capacity requirements. This is because many of the commercial distributed generators seek to locate in rural areas with generators that produce an industrial equivalent of load (e.g. often greater than 5MW of peak generation capacity). In these areas, the rural distribution networks are designed for light demand from houses and farms.

   Furthermore, once a large commercial generator is connected to a rural feeder, there is then likely to be insufficient network capacity to add additional generation onto an existing feeder. These rural feeders can be very long and so cover a large geographical area. Consequently, the cost to connect the next large generator can be substantial[1] and effectively block future additional distribution capacity connecting.

2. *Q2 Should the section 10 option to produce a users' guide extend to the process for getting an upgraded or new distribution line? Are there other section 10 information options that could be extended to include information about local networks and distributed generation?*

   The way that distributed generation connects to a distribution network is very different to a Transpower connection. Distributed generation connections normally use existing spare capacity, with the distributor only able to recover the incremental cost of the connection under the Electricity Industry Participation Code 2010. This results in larger commercial distributed generators using all the available surrounding network capacity, but not paying their fair share of the network infrastructure costs. Consequently, there is no funding for the distributor to increase the network capacity, which is an issue for the next distributed generator wanting to connect.

   This results in a first mover advantage that will quickly limit the amount of distributed generation that is able to be connected to New Zealand's distribution networks. This has occurred in the UK, with an initial rapid uptake in solar farms that has now stopped because of local distribution constraints. We suspect that a similar issue is occurring in the Australia, with their large solar farms.

3. *Do the work programmes outlined above cover all issues to ensure the settings for connecting to and trading on the local network are fit for purpose into the future? Are there things that should be prioritised, or sped up?*

   The Electricity Authority (EA) is encouraging distributors to introduce cost reflective pricing that would result in higher fixed charges. This would make distributed generation financially less cost

[1] Often requiring a new separate feeder to be built back to the nearest substation.

effective because most distributed generation owners want to remain connected to the network, so they would have to pay the higher fixed charge and have lower variable savings from using their own generation.

In addition, under the EA's TPM proposals the EA is proposing to remove peak transmission charges, which would significantly reduce the financial returns on household batteries. This is because the batteries could be run over the peak transmission periods and the transmission cost savings returned to the homeowner.

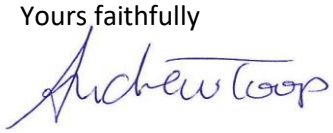
4. *What changes, if any, to the current arrangements would ensure distribution networks are fit for purpose into the future?*

The government needs to ensure that commercial distributed generators pay their fair share of network costs, with their line charges being on the same basis as households and businesses. If this does not occur, then there is the risk of social inequality with commercial distributed generation operators, and those that can afford solar arrays, being subsidised by other less well-off consumers. This has already occurred in Australia.

In addition, if commercial generators do not pay their fair share, then distributed generation constraints will occur quickly on distribution networks. This has already occurred on a large feeder on Counties Power's network. It has also occurred in the UK and ultimately suboptimally limited the amount of renewable generation able to be installed on the UK's local networks.

Lastly, as many EDBs are consumer owned, they can play an important role in ensuring both an uptake of new technology and that affordable technology is available to all homeowner demographics. As an example, Counties Power is looking at a low-cost solar solution for Kiwibuild homes in a new subdivision in its territory.

Yours faithfully



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