

To NZ Electricity Authority TE MANA HIKO

Submission on Promoting competition in the wholesale electricity market in the transition toward 100% renewable electricity. Dated 28/11/2022

From Vern Brasell Wairarapa Dairy farmer at Kaiwairai Dairies Ltd, Dairy NZ Climate Change Ambassador and Convener of Sustainable Wairarapa.

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I believe NZ must have a smarter electricity grid. This will enable small to medium size businesses and individuals to optimize the use of the current electricity grid PLUS add to the renewable generation needed to decarbonize energy at the lowest cost to the country. All of NZ can contribute not just the current suppliers of energy and transmission Co's. The government and the electricity authorities need to encourage and reduce red tape to accelerate the creation of a truly smarter electricity infrastructure.

A smart grid would price off peak power use at closer to its real cost, and would enable the economic use of the new battery technology coming available soon e.g. (organic polymer batteries etc.). This will provide better reward for load shedding by consumers and delay the need to upgraded line capacity. This is especially important in parts of NZ like the Wairarapa where line charges are very high due to the distance from the generators and lower density of the population.

There is a need for overseas investors capital and technology to speed up our move to 100% renewable electricity and energy but we shouldn't ignore opportunities for locals to be integrate into the NZ solution. The Electricity Authority has an important roll in enabling and encouraging an efficient transition. This will create opportunities for all sectors of the community. They will benefit from having reliable and renewable electricity at the lowest price. Additional benefits are a lower carbon foot print as well as greatly reducing the need to import energy from overseas.

It is well known with the increase in new intermittent renewable power generation coming on stream the Electricity Authority has to deliver a variety of cost- effective ways to uses the power effectivity and maintain the grid stability. The consultation document covers most areas relating to the variety of current challenges facing the transition for NZ towards 100% renewable electricity.

What is absent from the document is how small to medium businesses , individual and community groups including Iwi , will benefit from and contribute to the solutions. On our dairy farm we have 54 KW of solar panels. We use about 90% of the power produced on farm currently earning the farm about 14% return on the capital. This makes good economic sense.

A smarter NZ grid where individuals and Co's produce , store , share and sell electricity locally makes good economic sense and builds resilient communities. Bigger solutions take longer and the benefits aren't always shared equitably. With the right incentives or and red tape removed our farm will look to invest in more solar panels on buildings ,over drains and install batteries, instead of our current backup diesel generators that only operates when the power is down. Batteries could replace the generator and help to stabilize incoming power which is vital today with so much electronics in a modern cowshed thus reducing an ongoing problem we have today.

Thanks for the opportunity to make a submission. I wish to be heard.