Microgrid development new zealand

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As the Transpower report states: "There is no silver bullet in the battle against unmitigated climate change or in decarbonising our economy. However...solar energy is certain to play an increasing role in our energy future and in our efforts to avoid a climate crisis."

The Transpower report named Te Marui Hiko states: "electricity will increasingly become a distributed tool that consumers will generate and manage themselves at home." Microgrids could arguably be part of that picture too.

Microgrids are energy distribution systems which only involve a small group of connections. They can operate independently or be connected to a larger grid. Picture, for example, solar panels on a rooftop, accompanied by battery power to store generated energy. That power can then be used by the property owner, and even sold to others nearby. Residents or businesses with microgrids are generating energy close to where it is needed and can be proud of the fact they are producing clean, renewable energy - reducing green gas emissions and lowering their carbon footprint along the way.

Absolutely, microgrids are something to watch out for in New Zealand, says the head of the Sustainable Electricity Association of New Zealand (SEANZ) Brendan Winitana. He believes they will have a growing part to play in the development of New Zealand"s electricity network.

Brendan (who is both chief executive and chairman of SEANZ) says key organisations in New Zealand have invested, in recent years, in reports into solar powered energy and batteries. Both Transpower and the Climate Change Commission, for example, believe that the development of solar and batteries will be exponential.

"In New Zealand we are seeing the take up of solar panels and batteries increasing every month, so I see the development of microgrids coming off the back of that," Brendan says.

It"s early days for New Zealand yet, but there are a number of microgrids in both residential and rural areas dotted throughout the country. Brendan is aware of one microgrid that has 40 properties in play and has been running for about 18 months. Another, in Auckland, involves 12 commercial businesses.

Brendan believes microgrid development in New Zealand will grow "exponentially" as it has in other countries such as Hawaii and Germany. Australia is also adopting them to combat issues around securing energy supply.

The majority of New Zealanders feeding off the national grid will be well aware, Brendan says, that transmission and lines costs are a big thing. This is significant given the long shape of our country and the fact the bulk of electricity is generated at the bottom of the South Island, yet 40 per cent of all business happens

out of Auckland, and 35 per cent of the population lives north of the Bombay Hills. Consumers pay for that transmission cost. Those who are part of a microgrid are using on-site (or near-site) generation so there are no transmission or lines cost.

With microgrids come technological applications. The grids need to be managed to tell solar system where to send power, how much to send, monitor it, and charge the end user for it (if that energy is shared). All that is available now and is operating in NZ, Brendan says.

Brendan would like to see a "very clear" energy strategy wrapped around New Zealand"s renewable energy opportunities, with a driver being consumers paying the least cost for electricity. Microgrids can and do deliver that.

Meanwhile, Wellington Electricity chief executive Greg Skelton will be watching with interest to see what develops with solar units, and whether microgrids have a role to play in the future.

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