TRANSPOWER

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 6968
www.transpower.co.nz

Press release:
19 October 2022

Growth in generation interest and demand point to strong electrification trajectory

Transpower has released its six-monthly monitoring report, which tracks how Aotearoa New Zealand's energy system is measuring against the five key future scenarios detailed in the 2020 *Whakamana i Te Mauri Hiko* document. The monitoring report points to a continuation of trends identified in March. New Zealand remains on track to meet an 'Accelerated Electrification' scenario, with continued growth in new generation enquiries, over 27 GW of potential generation interest in the pipeline, and the emergence of offshore wind as a significant potential player.

Transpower General Manager Strategy and Customer Chantelle Bramley notes that interest in grid connection continues to grow, with a rise in both new generation and demand enquiries. Several new key projects have been announced since the last report, and Transpower has executed a contract with the first grid-scale solar project to connect to the national grid. She also reports a significant increase in wind generation, which now makes up over half of early stage grid connection enquiries. "In our last report, wind made up only 24% of new generation interest; it now makes up 45%, with more than half of this new potential capacity being offshore. New Zealand is emerging as a world-class resource for offshore wind." As previous reports note, not all interest will convert into built projects, but the total potential capacity of generation in the pipeline has risen from 20 GW in the previous report to 27 GW, including battery energy storage systems.

The report also points to a reduction in winter energy margins and an ongoing rise in peak demand. This trend is set to increase. Bramley observes that the top 10 largest peaks have all occurred in the past two winters, with six out of those ten occurring in 2022. "This continues to put pressure on supply, and electricity distribution business are beginning to forecast load increases in their planning processes. New generation will be needed to meet growing peak demand, as well as non-network solutions like demand response." This trend comes alongside other uncertainties, including the La Niña weather pattern impact on hydro generation, the potential closure of the Tiwai smelter, and the likely entry of other large energy users.

Signs suggest, however, that Aotearoa New Zealand is in the early stages of a period of broader electrification growth. A significant milestone within the reporting period is the release of the Government's Emissions Reduction Plan (ERP), with carbon budgets out to 2035. The commitment of targets into regulation, along with further policy and incentives, is adding momentum to the electrification of process heat, and transport. Roughly 1,500 EVs are being added to the fleet each month, or around 1 in 5 new vehicle sales, and the GIDI fund's tenfold increase will continue to drive the shift away from fossil fuels in order to reduce emissions in industry.

While the monitoring report notes that New Zealand's renewable electricity will need to increase from 20% of total energy consumption to 36% in order to meet targets, key measures are consistently tracking with the large-scale transformation of energy required to enable a net zero carbon future.

TRANSPOWER

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 6968
www.transpower.co.nz

Report highlights include:

- **Large increase in offshore wind interest driving new generation enquiries –** The big shift since the last monitoring report is a large increase in wind generation, which now comprises 43% of current interest and over half of early stage enquiries. One of the key drivers for the growth in wind enquiries is the recent and significant interest in offshore wind. Of the new generation enquiries for wind, around half are offshore projects.

- **New grid connection enquiries and renewable energy continue to increase** – The current financial year looks likely to build on FY22's strong activity with 28 enquiries already in the first quarter. Overall, these enquiries signal strong and growing interest in both large-scale demand and new renewable generation.

- **Over 27 GW of potential generation interest in the pipeline –** The total potential capacity of generation in the pipeline now is 27 GW, including battery energy storage systems, up from 20 GW in the last report. If two–thirds of this was installed by 2050, this would meet our *Accelerated Electrification* projection of 22 GW total installed capacity.

- **Increasing signs of growing residential electricity demand, with higher peak demand –** Although annual electricity demand remains stable at present, residential electricity demand is growing at a faster rate than that across other sectors, with growth in winter electricity demand outstripping summer demand. The top 10 largest peak demands have all occurred in the past two winters; 6 out of those 10 occurred in 2022. Growing peak demand must be supported by new generation, as well as non-network solutions like demand response.

- **Policy and investment are accelerating process heat decarbonisation -** The release of New Zealand's first emissions reduction plan (ERP) has firmly set in place policies and strategies for meeting future emissions budgets. The ERP includes a tenfold increase in the Government Investment in Decarbonising Industry (GIDI) fund, which has already built momentum in process heat decarbonisation, with the reduction of 7.5 million tonnes of CO_2e. Decarbonising process heat remains a large opportunity for New Zealand as it contributes 10% of gross emissions and 27% of energy-related emissions

- **Transport electrification** - Growth in electric vehicles (EVs) continues to be supported by the Clean Car Discount (CCD). There are currently around 38,000 EVs in NZ, or 1% of the total light vehicle (LV) fleet. Around 1500 EVs are being added to the fleet each month, or around 1 in 5 new vehicle sales. Since the rebate extended to other low-emissions vehicles in April, there has been a significant increase in the number of hybrids being registered each month. This now averages almost 5,000 compared to 3,000 prior to the change (an increase of 70%).

- **Battery technology and flexible demand** – Electric vehicles (EVs) are emerging as a rapidly growing potential resource for flexible demand response through smart charging. The report estimate shows almost 250 MW of potential capacity distributed throughout NZ. Recent announcements across New Zealand's electricity industry suggest that both micro-grid and large grid-scale batteries could soon play a bigger role in NZ's power system.

TRANSPOWER

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 6968
www.transpower.co.nz

- **Distributed solar installations** – these continue to grow in number and capacity. A record 32 MW of residential solar was installed in 2021. As of July 2022, 24.2 MW has been installed this year, which sets it on track to at least equal the 2021 record.

For all our reports in the Te Mauri Hiko series, visit https://www.transpower.co.nz/about-us/transmission-tomorrow.

For more information please contact:
Senior Communications Advisor Anna Smaill on 021 394 042.