

Waipipi Wind Farm

Newsletter
Edition

09

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Wind Farm Update

The first turbines were brought online and have been exporting renewable electricity to the Transpower national electricity network since November 15th. The assembly and commissioning of the remaining turbines continues.

All civil works have been completed apart from ongoing maintenance works. Restorative topsoiling of the completed construction areas and native planting along the Waipipi stream banks also continues.

The wind farm substation and transmission line were energised and commissioned on November 13th via a connection to the Transpower Waverley substation. The installed underground cabling network continues to be connected to wind turbines as they are being assembled.

Deliveries of blades, nacelles, hubs and tower sections have been completed with the final delivery on October 20th. On site, cranes continue to complete both pre-assembly (base and mid tower) and full assembly (top tower, nacelle, rotor) operations. A second main assembly crane arrived in September to assist with lifting operations.

Since commencing construction, the following works have been completed:

- Upgraded 4.5km of road between SH3 and the Dryden Road site entrance
- Established the site compound and site facilities
- Constructed an onsite access track network of more than 20km
- Completed the ground improvement at all 31 turbine locations
- Completed foundation construction at all 31 turbine locations
- Installation of the underground electrical cabling and fibre to all turbine sites
- Connecting of the underground electrical cabling to the assembled turbines
- Continued construction of the onsite substation including installation of the main transformer
- 31 turbines pre-assembled
- 20 turbines fully assembled
- 16 turbines operating



Community Engagement

Tilt Renewables is committed to engaging with the community to ensure there is consistent, transparent and open communication. A Community Consultative Group has been established and is made up of representatives from within the Patea and Waverley communities.

The objective of the Community Consultative Group is to facilitate information flow between Tilt Renewables and the community. The group will be an on-going point of contact for the community.

The functions of the Community Consultative Group include: acting as a forum for relaying community concerns about the construction and on-going operation of the Waipipi Wind Farm to the Tilt Renewables team, developing appropriate means of addressing (where possible) and managing those concerns, and reviewing the implementation of measures to resolve and manage community concerns. A Community Consultative Group meeting and site visit was held in September.

Minutes from the CCG meetings can be found on the project webpage: www.waipipiwindfarm.com

Fun Facts

- Less than 2% of land affected post construction
- Wind turbine generators (WTG's) spin at 12rpm
- The Waipipi Wind farm will produce enough clean energy each year to power about 65,000 homes and save the emission of roughly 250,000 tonnes of carbon
- Average site wind speed = 31kph at hub height
- Swept area of turbine blades = 13,273m²
- Distance from ground to blade at bottom of rotation = 30m
- Heaviest lift = Generator and nacelle at 110 ton
- Blade weight = 18 ton
- Combined weight of nacelle/hub/generator and 3 blades = 195 ton
- Total weight of entire turbine = ~450 ton
- Over 15,000m³ of concrete poured
- Over 2,000 tons of reinforcing steel used
- Each foundation = 430m³ concrete and 65 tons steel
- Over 21km of site roads built
- Over 57km of 33kV onsite cable laid in ground
- 11km of transmission line and 91 poles to Transpower Waverley substation
- Over 300 loads from port Taranaki to site for turbine components

Waipipi key facts

Installed capacity:
133 MW

Annual production:
450 GWh per year

Wind turbine type:
SWT130 – 4.3 MW

Number of turbines:
31

Tower height:
95 metres

Blade height:
160 metres

Rotor diameter:
130 metres

Site area:
980 hectares

Transmission line:
11 kilometres of 110kV overhead transmission on monopoles

Construction timeframe:
Approximately 18 months

COVID-19 Update

Construction activities at Waipipi Wind Farm continue under the guidance of the COVID-19 Alert Levels, as directed by the New Zealand Government. Specific and diligent site control measures continue to be implemented to reduce the risk of spread of COVID-19.

