

Project Brief: On- and Offshore Wind Energy

APPLICATIONS FOR THE RENEWABLE ENERGY FIELD

- New Zealand is recognised as having one of the best wind resources in the world due to its location and aims source 90% of electricity from renewable sources by 2025.
- The German-New Zealand Chamber of Commerce (GNZCC) is working together with German businesses (mostly SMEs) offering solutions and products for wind turbines and parks, control systems, and measurement and analysis tools for wind energy.
- The project serves as a catalyst for seamless knowledge exchange between Germany and New Zealand, actively supporting New Zealand in advancing its decarbonisation and renewable energy goals, and implementing a tailored wind energy infrastructure that aligns with its specific needs.

Overview

The Wind Energy Project, funded by the German Federal Ministry of Economic Affairs (BMWK) through its 'Energy Export Initiative,' establishes a connection between cutting-edge technologies in on- and offshore wind energy solutions and New Zealand's need's for up-to-date renewable energy infrastructure. The initiative comprises three measures: a comprehensive analysis of the target market New Zealand, the organisation of networking and industry events, and on-site B2B appointments.

What's the issue?

The current energy strategy aims to obtain 90% of electricity from renewable sources by 2025, reaching 100% by 2035. Additionally, the aim is to transition to a carbon-neutral economy by the year 2050.

New Zealand's electricity generation heavily relies on hydroelectric power. Challenges arise in so-called "dry years" when reduced rainfall necessitates alternative power sources, currently derived from fossil fuels, conflicting with government objectives.

Wind energy presently contributes about 6% to New Zealand's electricity, with significant potential for a higher percentage of total generation. To achieve a 100% renewable energy generation, a substantial increase in installed wind capacity is necessary to boost renewable energy production from the current approximately 85% of New Zealand's electricity supply.

The World Bank estimates that New Zealand's offshore wind resources have the potential to generate electricity 150 times more than its domestic market. This implies that New Zealand could export green energy to the rest of the world, contributing to the global decarbonisation of the economy.

New Zealand is already well advanced in hydro and geothermal energy, with a well-established but relatively small wind generation sector. Abundant wind resources and vast land availability make it suitable for wind farm development. The New Zealand Ministry of Business Innovation & Employment (MBIE) estimates **additional capacity potential at around 14,700 MW**, providing ample opportunities for investments across the entire clean energy value chain.

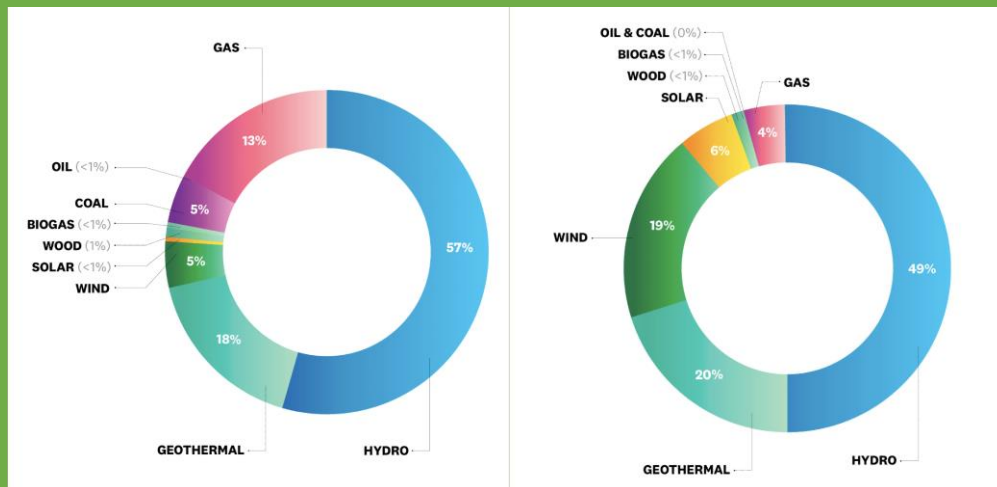
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Average electricity generation 2017-2021 and projected electricity generation by 2035



Source: Gen Less, 2023

How can the project help?

The Wind Energy Project will help to bridge German expertise and state-of-the-art solutions from industry leaders with the specific needs of New Zealand. These versatile solutions offer practical applications in various scenarios.

Due to New Zealand's abundant offshore wind energy, coupled with hydroelectric capabilities, the project has the potential to foster the growth of green hydrogen and e-fuel sectors, and to draw in energy-intensive industries like data centres and advanced manufacturing to the country.

Benefits

The project offers mutual advantages for both German manufacturers and New Zealand. On the German side, it provides manufacturers with a platform to showcase their cutting edge solutions for the wind energy infrastructure and enter a new market where there is a significant demand for it.

For New Zealand, the project facilitates the achievement of renewable energy and greenhouse gas emission targets and the establishment of supporting wind energy infrastructure tailored to future demand.

How will the project work?

The GNZCC, in collaboration with BMWK, is conducting a targeted market analysis and devising a market entry strategy for German businesses offering customised solutions for New Zealand's off- and onshore wind energy infrastructure. The initiative focuses on identifying key requirements and stakeholders within the sector. Findings will be presented at a German industry conference, with plans to connect German service providers with New Zealand businesses in late 2024. The GNZCC will oversee all aspects of market entry, including project procurement and facilitating business-to-business talks.

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