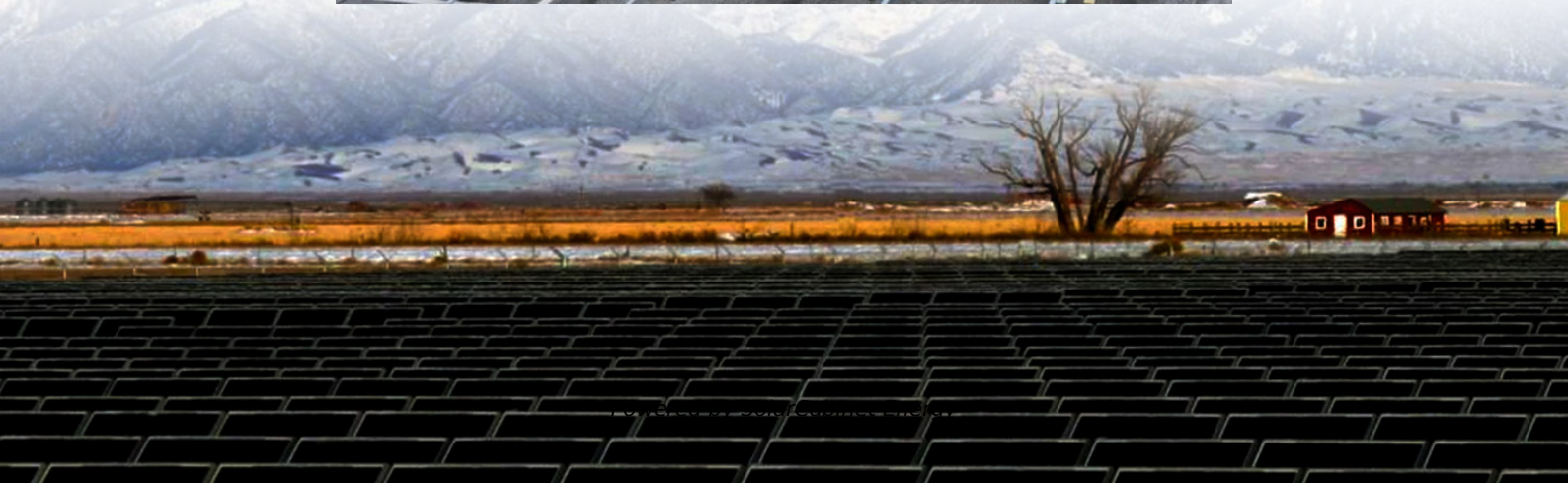


What does a wind turbine at a Cook Islands communication base station look like





Overview

The is a net importer of energy, in the form of products. Total energy consumption was 1,677,278,000 BTU (1.77 TJ) in 2017, of which 811,000,000 (0.86 TJ) was in the form of oil. In 2012 47% of imported oil was used in the transport sector, 30% in aviation, and 27% for electricity generation. Electricity consumption is 31.6 GWh, from 14 MW of installed generation capacity, with most load concentrated on the main island of . Per-capita electricity con.

Will the Cook Islands have a wind energy project?

The proposed wind energy project in the Cook Islands, assuming the wind resource proves to be viable and the project performs as expected, will have a high international profile and, as indicated in the UNDP/UNESCO report, will be designed for ease of replication by other island countries in the Pacific and elsewhere.

How was electricity produced in the Cook Islands?

Electricity in the Cook Islands was historically produced by diesel generators on each island. Fuel was imported from Auckland and required long sea voyages to get to the northern atolls, resulting in high costs and occasional supply disruptions.

How much energy does the Cook Islands use?

The Cook Islands is a net importer of energy, in the form of petroleum products. Total energy consumption was 1,677,278,000 BTU (1.77 TJ) in 2017, of which 811,000,000 (0.86 TJ) was in the form of oil. In 2012 47% of imported oil was used in the transport sector, 30% in aviation, and 27% for electricity generation.

Do I need an environmental impact assessment for a wind turbine project?

A full Environment Impact Assessment (EIA) is required by the Government of the Cook Islands for a project of this magnitude, but preliminary on-site assessment by the Environment Service, Government of the Cook Islands have not identified any environmental issues that would hinder installation of



wind turbines on any of the proposed site C.

How does a wind turbine work?

Each wind turbine produces three-phase power at 415 volts to the transformer at the base of the tower. The transformer steps this voltage level up to the 11 kV grid distribution voltage and the power is transferred underground through cables to the existing power line nearest the site.

Which telecommunication services are more sensitive to wind turbines?

The telecommunication services included in this review are those that have demonstrated to be more sensitive to nearby wind turbines: weather, air traffic control and marine radars, radio navigation systems, terrestrial television and fixed radio links.



What does a wind turbine at a Cook Islands communication base sta



Energy in the Cook Islands

The Cook Islands is a net importer of energy, in the form of petroleum products. Total energy consumption was 1,677,278,000 BTU (1.77 TJ) in 2017, of which 811,000,000 (0.86 TJ) was in the form of oil. In 2012 47% of imported oil was used in the transport sector, 30% in aviation, and 27% for electricity generation. Electricity consumption is 31.6 GWh, from 14 MW of installed generation capacity, with most load concentrated on the main island of Rarotonga. Per-capita electricity con...

[Feasibility of grid-connected wind power for Rarotonga, Cook ...](#)

The wind regime in the Cook Islands and in much of the Pacific is characterized by moderate trade winds, which calls for wind turbines having a large swept area in relation to power output.



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