

# Tokelau solar power plant consultant

Can a solar array power Tokelau?

Solar Array's seen on the three tiny islands of Tokelau to completely produce solar power energy. The renewable energy system comprising of solar panels, storage batteries and generators running on biofuel derived from coconut will generate enough electricity to meet 150% of the islands' power demand.

How much electricity does a solar system provide in Tokelau?

Each system alone is among the largest off-grid solar power systems in the world, and together they are capable of providing 150% of current electricity demand in Tokelau, a much higher amount than the 90% that was originally planned for.

Why did Tokelau switch to solar?

Yet despite the challenges involved in installing comprehensive solar systems in such a remote location, switching to solar was absolutely crucial for the tiny collection of islands. "Tokelau's atolls are low-lying and especially susceptible to the adverse effects of climate change," Mayhew stressed.

Why is electricity so expensive in Tokelau?

Before the PowerSmart systems were installed on the nation's three atolls, Tokelau was highly dependent on imported fossil fuels to meet its energy needs and therefore vulnerable to international price fluctuations and increasing fuel costs, making electricity extremely expensive for both households and businesses.

How much does a diesel generator cost in Tokelau?

Indeed, until recently, diesel generators were burning around 200 litres of fuel daily on each atoll, meaning more than 2,000 barrels of diesel were used to generate electricity in Tokelau each year, costing more than \$1m NZD.

How much money does Tokelau spend importing fuels a year?

Tokelau spends about \$829,000 every year to import fuels. The government of Tokelau now plans to spend these savings on other essential services like health and education. The savings will also be used to repay the grants and financial assistance the government received from New Zealand government for this project.

The Tokelau Renewable Energy Project (TREP) saw the installation of solar diesel hybrid power systems on Fakaofu, Nukunono and Atafu, the three atolls of Tokelau. There is a clear need ...

The project includes : 4032 solar modules, 196 string inverters, 112 DC charge controllers, 84 battery inverters and 1344 batteries in 48V banks. The system allows for up to 2 days of energy without any solar input.

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met by solar power. Designed by Powersmart Solar in partnership with ITP Renewables, construction of the combined 1 MW of stand-alone PV spread across the three atolls was completed in October 2012.

Tokelau Island is the first island in the world powered by 100% solar energy. With a population of roughly 1,500 people, the island successfully made the switch from fuels to a clean, renewable energy system via solar power.

The Tokelau Renewable Energy Project (TREP) saw the installation of solar diesel hybrid power systems on Fakaofu, Nukunono and Atafu, the three atolls of Tokelau. There is a clear need across the community to better understand the reasoning behind tariffs and what different tariffs mean for the community

Tokelau is the first country in the world to produce all its electricity needs from renewable energy. This small Pacific nation with three atolls and 1160 people has switched off its noisy, polluting diesel generators and is now totally powered by the sun. People in Tokelau began talking about a solar-powered future more than a decade ago.

Hybrid Photovoltaic/Coconut based Power Systems in Tokelau - Consultancy for the Feasibility, Environmental Impact Assessment, System Design and Specifications of Major Components and Financing Strategy

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Funded by the New Zealand Aid Programme and realised by PowerSmart and energy consulting firm IT Power Australia, the project involved the installation of 4,032 photovoltaic panels, 392 inverters and 1,344 batteries across the three atolls, and was completed on time and under budget.



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