## **SOLAR** PRO. Energi power Tokelau

#### 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.

#### What is Tokelau's energy policy?

The primary focus of the policy is the desire of Tokelau to become self-reliant in energythrough a combination of renewable energy and energy efficiency measures.

#### Where does Tokelau get its electricity from?

Except for that part of the electricity supply provided by Solar Photovoltaic (PV) to TeleTok facilities on all three atolls and the University of the South Pacific (USP) facility on Atafu, essentially all energy in Tokelau currently is from imported petroleum.

#### 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.

#### Does Tokelau still use diesel?

Tokelau was said to be the first country in the world to have gone 100% solar, in 2013. Diesel usage, previously needed for power generators, is said to have dropped by 90 percent. Some power generation using diesel remains necessary as backup and in prolonged cloudy spells.

#### 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.

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Energy trade includes all commodities in Chapter 27 of the Harmonised System (HS). Capacity utilisation is calculated as annual generation divided by year-end capacity x 8,760h/year. Avoided emissions from renewable power is calculated as renewable generation divided by fossil fuel generation multiplied by reported emissions from the power sector.

The Tokelau Renewable Energy Project (TREP) saw the installation of solar diesel hybrid power systems on Fakaofo, Nukunonu 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

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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.

The Government of Tokelau sees the PV Project as the first step and therefore trial towards the long-term goal of energy independence based on renewable energy. The project is implemented by the Government of Tokelau and funded jointly by Government of New Zealand, Government of France, UNESCO Apia and UNDP Samoa.

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