

## European Solar and Energy Storage Solutions

# Cook Islands we get solar energy from



## Overview

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Renewable energy in the is primarily provided by and biomass. Since 2011 the Cook Islands has embarked on a programme of renewable energy development to improve its and reduce , with an initial goal of reaching 50% renewable electricity by 2015, and 100% by 2020. The programme has been assisted by.

Does the Cook Islands have solar power?

The Cook Islands Electricity Sector historically been powered by diesel generators. Since around 2011, increasing solar PV generation on Rarotonga has changed this situation. And in 2014- 15, installation of 95-100% renewable solar hybrid systems on the Northern Group Islands further altered the mix.

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.

Why do Cook Islands residents need a full-time power system?

And with local residents trained during the installation process, the community is empowered to maintain and operate the systems themselves. Now with full-time power, the future has taken a new shape for Cook Islands' residents – an improved quality of life, and increased economy activity.

How did we help the Cook Islands Government achieve its aim?

We helped the government realise its aim. To support the Cook Islands Government, the New Zealand Government – through the Ministry of Foreign Affairs and Trade, installed mini-grid photo-voltaic power systems in a number of villages on six remote islands. We helped manage this logistically enjoyable project.

Is full-time power the future of Cook Islands?

Now with full-time power, the future has taken a new shape for Cook Islands' residents – an improved quality of life, and increased economy activity. The improved livelihood in the communities that now have the benefit of reliable, 24hour power supply is immeasurable.

Why is there no electricity on the islands?

Bad weather and other events often prevent goods arriving on the islands. Previously, electricity was provided by diesel generators, usually for around 12 hours per day. Power supply was effected by issues of reliability, maintainability, capacity and access to adequate, regular diesel supplies.

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### Solar power station opens on Mitiaro

The first of four solar power stations commissioned under the Cook Islands Southern Renewable Energy Project will be officially opened on the island of Mitiaro this week, bringing the Cook Islands one step closer to its long-term renewable energy targets.

### ENERGY PROFILE Cook Islands

Energy self-sufficiency (%) 28 Cook Islands  
 COUNTRY INDICATORS AND SDGS TOTAL  
 ENERGY SUPPLY (TES) Total energy supply in  
 2020 Renewable energy supply in 2020 92% 8%  
 Oil Gas Nuclear Solar PV: Solar resource potential  
 has been divided into seven classes, each  
 representing a range of annual PV output per  
 unit of capacity



### Cook Islands Renewable Energy

The Cook Islands Government aims to achieve 90% of their power needs from renewable energy by 2020. We helped the government realise its aim. To support the Cook Islands Government, the New Zealand Government - through the Ministry of Foreign Affairs and Trade, installed mini-grid photo-voltaic power systems in a number of villages on six

### Pacific Lighthouses: Cook

## Islands

Renewable Energy Opportunities and Challenges in the Pacific Islands Region: Cook Islands 1 1. Country context Physical description. The Cook Islands consist of 15 islands totalling 240 km<sup>2</sup> of land, located in the South Pacific Ocean half-way between Tonga and Tahiti. Ap-proximately 90% of the land and population are in the



### Solar-plus-storage for the Cook Islands - pv magazine Australia

Around 4.2 MWh of energy storage capacity will be connected to a solar and diesel micro-grid on Rarotonga, the largest of the islands in the South Pacific nation. Three 40-foot containers with a total power output of 4.8 MVA will be used as a power reserve and for grid support by utility Te Aponga Uira.

### Solar-plus-storage for the Cook Islands - pv magazine ...

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### COOK ISLANDS RENEWABLE ENERGY SECTOR PROJECT

renewable energy generation technology was based on the satisfactory solar resource, suitability to the site, maturity of the technology and supporting systems (including batteries), and low maintenance requirements.



## December Weather in Cook Islands Cook Islands

The earliest sunrise of the month in Cook Islands is 5:48 AM on December 1 and the latest sunrise is 12 minutes later at 6:00 AM on December 31.. The earliest sunset is 7:08 PM on December 1 and the latest sunset is 16 minutes later at 7:24 PM on December 31.. Daylight saving time is not observed in Cook Islands during 2024. For reference, on December 21, the ...



## Cook Islands October Weather, Average Temperature (Cook Islands)

Over the course of October in Cook Islands, the length of the day is increasing on the start to the end of the month, the length of the day increases by 35 minutes, implying an average daily increase of 1 minute, 10 seconds, and weekly increase of 8 minutes, 13 seconds.. The shortest day of the month is October 1, with 12 hours, 18 minutes of daylight ...

## New Zealand company completes solar project in Cook Islands

Infratec Chief Executive Greg Visser said the four solar plants were now providing clean, reliable and affordable energy to almost 1500 people - or about 9 percent of the Cook Islands' population. The solar panels, which are backed by battery storage, will meet about 95 percent of the islands' energy needs, he said.



## Renewable energy 2030 commitment

At the 2022 United Nations Climate Change Conference (COP27) it was reported that the Cook Islands has converted 13 of its 15 islands to solar energy and set a target of 2025 for the remaining two. The target was revised to 2030 in September last year by director of Renewable Energy Development, Tangi Tereapii.

## Renewable energy in the Cook Islands

Renewable energy in the Cook Islands is primarily provided by solar energy and biomass. Since 2011 the Cook Islands has embarked on a programme of renewable energy development to improve its energy security and reduce greenhouse gas emissions, with an initial goal of reaching 50% renewable electricity by 2015, and 100% by 2020. The programme has been assisted by ...



## Electricity in Cook Islands in 2022

As of 2022, the state of electricity consumption in the Cook Islands illustrates a balanced yet elementary mix of energy sources.



Approximately half of the electricity generated comes from low-carbon sources, with solar energy contributing entirely to this segment. The other half is derived from fossil fuels, indicating that the Cook Islands is equally dependent on high-emission energy.

## Cook Islands On Target To Be 100 Percent Renewable

The Asian Development Bank and the European Union have together contributed more than \$18m to get solar projects off the ground, while the islands' government has added \$5.83m. Last May, the New Zealand government completed a \$20m project to build six solar arrays. Lead image: Cook Islands fishermen net fishing in Muri beach.



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## Cook Islands - 100% Renewable Energy Atlas

The solar projects is expected to save 1.09 million liters of diesel consumption annually, and cut carbon dioxide emissions by 2,930 tons. This

project will assist the Cook Islands government's Office of the Energy Commissioner and the Renewable Energy Development Division in developing an energy efficiency policy implementation plan.



## Cook Islands: 100% Renewable Energy in Different Guises

To support this ambitious plan the Asian Development Bank and the European Union fund the Cook Islands Renewable Energy Sector Project, which will construct up to six solar photovoltaic (PV) power plants with a total installed capacity of about 3 megawatts-peak coupled with battery to store electricity from solar energy.

## How Solar Power is Boosting Business, Education in ...

Life in the outer islands of the Cook Islands has been transformed with the transition to clean, affordable, We never had 24-hour power then, it would run for three days a week, five days a week, and once ...



## COOK ISLANDS RENEWABLE ENERGY SECTOR PROJECT ...

COOK ISLANDS RENEWABLE ENERGY SECTOR PROJECT - Rarotonga Battery Energy Storage System Revision No: 0 E304965-TR-4 8 April 2016 v ontents 1. Introduction 1 1.1 The Cook Islands Renewable Energy Sector Project 1 1.1.1

## Overall policy targets and implementation plan 1 1.1.2 Contribution of the Cook Islands Renewable Energy Sector Project 3



### **ENERGY PROFILE Cook Islands**

Solar PV: Solar resource potential has been divided into seven classes, each representing a range of annual PV output per unit of capacity (kWh/kWp/yr). The bar chart shows the proportion of a country's land area in each of these classes and the global distribution of land area across the classes (for comparison).



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