#### How will new energy technologies affect the Cook Islands?

In future, new energy technologies such as marine energy may offer new opportunities for the Cook Islands to generate electricity from other renewable sources. Developments in energy storage or in energy efficiency may also further reduce the Cook Islands' reliance on diesel. The Cook Islands prefers to use proven and economic energy technologies.

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.

Will the Cook Islands use renewable electricity?

The Cook Islands will be careful in its selection of renewable electricity options and will not entertain unproven or non-commercial technologies. The attached Summary Table provides some indicative and preliminary information on the types and costs of the renewable electricity technologies we are considering.

Why is energy important in the Cook Islands?

Energy is a fundamental prerequisite to the sustainable socio-economic developmentof a nation. As such, the Cook Islands Government considers that environmental protection, energy security and economic growth are inseparable key pillars of our country's development.

Where are solar panels installed in the Cook Islands?

The Cook Islands is a recipient of the Fund and has committed to installing Solar (PV) systems for the islands of Rakahanga,Pukapuka,Nassau,Suwarrow and part of Manihiki.

What is a Cook Islands renewable electricity chart (road map)?

This document is called the Cook Islands Renewable Electricity "Chart". Other countries have called similar documents a "Road map" - and these are countries that are either landlocked or have many kilometres of road between settlements. Our environment is different. We have many kilometres of sea between islands.

# **COOK ISLANDS SITE DE ENERGIA** SOLAR

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).

**SOLAR**°

As a small island developing state, the Cook Islands has unique attributes that considerably enhance the benefits to be gained from renewable electricity. Located in the South Pacific Ocean, the Cook Islands is sandwiched between Tonga to

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, [1] with an initial goal of reaching 50% renewable electricity by 2015, and 100% by 2020. [2]

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## **COOK ISLANDS SITE DE ENERGIA** SOLAR

Although nearly all households in the Cook Islands are connected to grid electricity, only 5.5% of households have additional solar photovoltaic systems installed, and 1% use small diesel generators. Several ???

The Government of the Cook Islands (GCI) has a policy of 100% renewable energy by 2020. The implementation of this plan is well underway, with renewable energy systems installed at half of the inhabited islands (the Northern Group) in 2014-15, and systems for most of the Southern Group planned for installation in 2016-17.

In its approach to delivering a 100% renewable energy target across 12 islands by 2020, the Cook Islands presents a rare insight into how planning requirements of high penetration renewable island systems vary with scale.









Although nearly all households in the Cook Islands are connected to grid electricity, only 5.5% of households have additional solar photovoltaic systems installed, and 1% use small diesel generators. Several actions have taken place throughout the islands to increase the uptake of renewable energy.

**SOLAR**<sup>°</sup>

Te Mana O Te Ra ("The Power of The Sun") is a photovoltaic power station at Rarotonga International Airport in the Cook Islands. It is the largest solar power station in the Cook Islands. It is owned and operated by Te Aponga Uira. The array consists of 3051 solar panels and has a peak output of 960 kW. [1]

### 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 ???





