# **SOLAR** PRO. Cook Islands power backup

#### 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.

#### 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.

#### 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.

#### What changes will the Cook Islands make?

The changes will include management of power utilities, environmentally friendly and cost effective renewable electricity sources, and energy efficient strategies. The Cook Islands will be careful in its selection of renewable electricity options and will not entertain unproven or non-commercial technologies.

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.

#### Can a partner help the Cook Islands achieve its targets?

The Cook Islands is looking for partners who can help achieve its targetsthrough funding the conversion of one or more of the islands from diesel generation to renewable energy. We acknowledge the support we have already received from our partners.

Onshore wind: Potential wind power density (W/m2) is shown in the seven classes used by NREL, measured at a height of 100m. The bar chart shows the distribution of the country's land area in each of these classes compared to the global distribution of wind resources. Areas in the third class or above are considered to be a good wind resource.

The island of Pukapuka has a new generator to help with its power issues. The Government delivered the new generator last week. It comes after residents told Cook Islands News issues with solar batteries and a faulty

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generator had ...

provide backup diesel power), and the existing distribution grid. The system will deliver reliable, 24/7 power to almost all residents and businesses on At iu (2 houses were identified as remote from the grid and have existing off-grid power supply). The proposed PV system could produce approximat ely 549 MWh of energy annually. Considering the

Government of The Cook Islands has taken an audacious step towards transforming its country from dependency to fossil fuel as an energy source to a future of Renewable Energy means as its source of electrical power generation. To guide it in its progress towards achieving this target, it ...

Power Utility in the Cook Islands oResponsibility ogeneration, distribution and retailing of electricity on Rarotonga oservicing 80% of the power needs of the country, on Rarotonga oPresentation oNational goals on the electricity sector oElectricity sector pre RE state, current, and future plans

The Cook Islands has a financially healthy electricity sector with technical and commercial challenges requiring on-going investment. With the exception of Pukapuka, Nassau and Suwarrow, the Cook Islands has some form of electricity network. Power supply on Rarotonga is the responsibility of the government-owned utility Te Aponga Uira ("TAU").

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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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...

The purpose of this report is to review the status of the power sector in the Cook Island communities of Rakahanga, Manihiki and Pukapuka. This report is required to provide both a general update of the power sector for these locations and to inform the proposed development of community-scale photovoltaic power systems as described in the ...

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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.

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