

## European Solar and Energy Storage Solutions

# Smart grid IIC Pitcairn Islands



## Overview

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Can solar energy replace fossil fuels on Pitcairn Island?

Pitcairn's authorities have launched a renewable energy project designed to replace fossil fuels with solar energy. The goal is to replace 95% of the current diesel consumption on Pitcairn Island (75,000 liters per year) with a combination of energy saving and solar electricity through the installation of a hybrid photovoltaic solar energy system.

Are island communities ready for smart grids?

Islands are widely recognised as ideal pilot sites that can spearhead the transition to clean energy and development towards a sustainable and healthy society. One of the assumptions underpinning this notion is that island communities are more ready to engage with smart grids (SGs) than people on the mainland.

What is the Smart Islands energy system (Smile) project?

Therefore, the development of market ready technologies that facilitate this transition are important. The Smart Islands Energy System (SMILE) project will demonstrate nine different smart grid technologies on three different islands. The end goal of the project is to foster the market introduction of these nine technologies. What is a smart grid?

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Are the Pitcairn Islands Green?

Pitcairn Islands, a group of five islands with a total area of 47 km<sup>2</sup> and which constitute one of the most remote archipelagos in the world, turn to safer, greener energies that best meet the needs of the population. Pitcairn's authorities have launched a renewable energy project designed to replace fossil fuels with solar energy.

What role do smart islands play in decarbonizing the economy?

Overall, they will have a fundamental role in decarbonizing the economy. The Smart Islands Energy Systems (SMILE) project will develop nine smart grid solutions in three large-scale pilot projects in different regions of Europe with similar topographic characteristics but different policies.

How can a smart grid help a grid operator?

In this context of marked change, in which grids no longer have to manage one-way flows (from large producer to consumer), but also two-way flows, a smart grid can be of great help to the grid operator in the operation and planning phases.

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### Home

Welcome to the Open Smart Grid - OpenSG !  
 Welcome to the OpenSG User's Group SharePoint site. You can now retrieve your userID and PW using your email address you used when registering. If you do not already have an account on the new site, you will need to register for a new account this will be automatically assigned to you by the new

### How Smart Grids Can Support Renewable Energy Communities On Small Islands

Gaetano Zizzo is an Associate Professor at the Engineering Department of the University of Palermo. He got his M.Sc. and Ph. D. degrees in Electrical Engineering at the University of Palermo in 2002 and 2006, respectively. Since 2007, he has been working with the Power System group of the Engineering Department at the same University, and in 2020, he qualified as Full ...

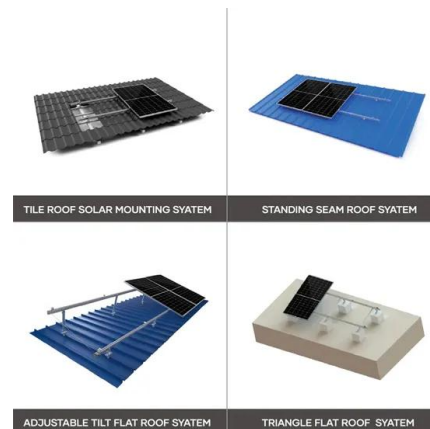


### Green News: Pitcairn's authorities have launched a renewable ...

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## RobustSE

Grid Science Solutions, LLC (GSS) (former Smart Electric Grid, LLC) is a leading provider of advanced system monitoring technology for smart grids, addressing the challenges of increasing renewable energy penetration and rising extreme weather events. Since 2013, GSS has been supported by the National Science Foundation's SBIR program in



## Governments Look To "Smart Islands" For High Tech And Low

Another program named the Smart Fossil Free Island has also been using smart tech to reach its sustainable development goals and has inspired other local governments to follow their example. The

## SCHNEIDER ELECTRIC SMART GRID SOLUTIONS, LLC

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## Advanced Smart Grid Solutions at the Core of Island ...

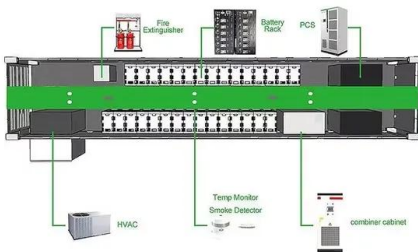
Far more significant, smart, digital grid technologies increase the penetration of renewables in the grid, which is essential to turn islands into fossil fuel-free territories. With this

kind of high-level integrated architecture, islands can rely on a green electrical grid.



### 3D World Map -

Location: Oceania, islands in the South Pacific Ocean, about one-half of the way from Peru to New Zealand Geographic coordinates: 25 04 S, 130 06 W Map references: Oceania Area: total: 47 sq km land: 47 sq km water: 0 sq km Area - comparative: about 0.3 times the size of Washington, DC Land boundaries: 0 km Coastline: 51 km Maritime claims: exclusive ...



### SMILE Project: Smart Island Energy Systems

The project tested innovative strategies to boost clean energy transition on islands by targeting the electric distribution grids to enable demand response schemes, smart grid functionalities, storage and energy system integration.

### (PDF) The Transition to Clean Energy: Are People Living in Island

underpinning this notion is that island communities are more ready to engage with smart grids (SGs) than people on the mainland. This is believed to be due to the high costs of energy on



## Smart Grids: what they are, how they work, and their benefits

Smart grids are one of the key pillars of the energy transition due to their economic, environmental and social benefits. Their role is even more crucial in the context of electricity distribution, as they are an enabler for the integration of renewable energy on a local scale and promote the electrification of consumption.

## Expertpower EMS

Measure, Analyze, Optimize and Save  
Expertpower is a comprehensive energy management software suite offering a range of applications. These include Meter Data Management (MDM), billing, monitoring, business intelligence (BI), energy efficiency, demand response, in-depth power quality analysis, and support for core planning and forecasting processes of independent ...



## Financing smart grids & electric mobility (Madeira, Portugal)

The Smart Islands Energy System (SMILE) project



is a collaboration of nineteen partners from European countries funded by the Horizon 2020. On three different islands - Samsø (Denmark), Orkney Islands (UK) and Madeira (Portugal), the project will demonstrate nine different smart grid technologies. On Madeira, an intelligent control and automation system is currently being ...

## Bringing Renewable Energy to Pitcairn Island

Several meetings were held on Island and by teleconference with our partners and the Solar Energy project began to take shape. The aim of the project is to ensure that every Pitcairn home and government building has a power connection from the grid to the household or building. Removing demand for fossil fuel.



## Bringing Renewable Energy to Pitcairn Island

The aim of the project is to ensure that every Pitcairn home and government building has a power connection from the grid to the household or building. Removing demand for fossil fuel. The final draft was submitted and approved by all parties in early November.

## Advanced Smart Grid Solutions at the Core of Island Sustainability

Far more significant, smart, digital grid technologies increase the penetration of renewables in the grid, which is essential to turn islands into fossil fuel-free territories. With this ...



## Avanci Smart Meter

The Avanci Smart Meter program is the solution for simplifying the entire licensing process, offering manufacturers (and grid operators who brand their own smart meters) the efficient option of a single license for their connected products, covering the essential cellular technologies of all of the licensors currently in the program, plus those

## Challenges and Perspectives of Smart Grid Systems in Islands: A ...

Islands are facing significant challenges in meeting their energy needs in a sustainable, affordable, and reliable way. Traditionally, the primary source of electricity on the islands has been imported diesel fuel, with high financial costs for most utilities.



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