

# Portugal Porto Smart Energy Storage Project





## Overview

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The project consists of the installation of a 4 MW power plant and 3 MWh of power capacity, with the aim of providing primary response, replacing a thermal generator at all times, improving the efficiency of the thermal park and reducing the rejection rate of energy from renewable sources, as well as ensuring energy supply for at least 15 minutes in the event of a thermal group failure. Will Porto Santo be able to run the electricity grid full-time?

According to a report by the BBC, the island would require 500 bidirectional EVs to run the electricity grid full-time. Porto Santo could add more battery storage capacity, but because energy consumption spikes during the summer with tourism, it isn't viable to exceed 80 percent penetration of renewables.

How will EV batteries work in Porto Santo?

During the final phase, it is hoped that the EV batteries will be able to store the excess energy generated primarily by Porto Santo's wind and solar farms, allowing for a steady electrical supply to be fed back into the grid.

Will Porto Santo become a 'smart fossil free island'?

A new innovative plan has been formulated by the Regional Government of Madeira, Group Renault and Empresa de Electricidade da Madeira (EEM) in a bid to turn Porto Santo into the first 'Smart Fossil Free Island' in the world.

Where does Porto Santo get its electricity from?

The North Atlantic island, some 500 miles east of Casablanca and roughly on the same latitude, gets a good amount of sun and wind. But, in 2017, these renewable sources accounted for only 15 percent of Porto Santo's electricity supply; the rest of the energy mix came from non-renewable resources.



## Portugal Porto Smart Energy Storage Project

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5 days ago · The Portuguese government aims to make Porto Santo the first smart, fossil-free island in the world and launched the "Sustainable Porto ...

### [Galp and Powin launch 5MW battery storage ...](#)

Apr 21, 2025 · The battery energy storage project utilizes Powin's Centipede Stack750 and a power conversion system from Hitachi Energy, ...



### [Groupe Renault and EEM create first "smart ...](#)

Feb 21, 2018 · Europe's electric vehicle leader Groupe Renault and energy supplier Empresa de Electricidade da Madeira partner to facilitate the ...

## Portugal s Porto Emerges as a Hub for Innovative Energy Storage

Porto's new energy storage box manufacturers are answering a global demand surge driven by renewable energy adoption. Think of these systems as "energy banks" - they store excess ...



### [Welcome to Europe's first smart island](#)

Apr 18, 2022 · Created for the Smart Fossil Free Island project, Marketplace uses an algorithm to balance supply and satisfy demand, automatically routing surplus renewable energy towards ...



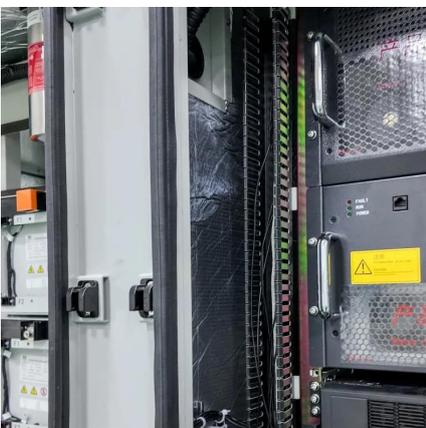
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## **Vasco da Gama CoLAB**

Vasco da Gama CoLAB is a Portuguese collaborative laboratory for the research and development of energy storage solutions. VG CoLAB develops innovative energy storage ...

## Portugal, Porto Santo to become world's first ...

Aug 26, 2020 · Hitachi ABB Power Grids has teamed up with Groupe Renault to deploy an energy storage system on the Portuguese island of Porto ...



## World's first smart fossil-free island

Aug 25, 2020 · The Portuguese government aims to make Porto Santo the first smart, fossil-free island in the world and launched the "Sustainable Porto Santo" initiative. A fundamental part of ...



## [Porto's Pilot City Activity: WAKE UP](#)

The local context for the WAKE UP pilot project in Porto involves a commitment to achieving carbon neutrality by 2030, as outlined in ...



## **Portugal**

Green Hydrogen Vision The Government of Portugal aims at achieving carbon neutrality by 2050 and envisages hydrogen as a fundamental vector for the decarbonization of various sectors of ...

## [Smart Energy Storage Solutions in Porto Powering a ...](#)

Porto is emerging as a hub for renewable energy innovation, and smart battery systems are at the heart of this transformation. This article explores how energy storage batteries are reshaping ...



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## Renault, EEM to create smart electric ecosystem on Porto ...

Feb 26, 2018 · The programme is based on four key pillars, namely electric vehicles (EVs), stationary energy storage, smart charging and vehicle-to-grid (V2G) charging. Together, they ...



## ELECTRICITY STORAGE IN PORTUGAL

Nov 7, 2025 · PORTUGUESE STORAGE AS OF TODAY Portugal's energy-storage market is entering a new stage of maturity, combining grid-scale standalone batteries and hybrid (co ...

## Porto Novo Pumped Storage Power Station: Location and ...

Jul 25, 2025 · Nestled in the rugged hills of northern Portugal, the Porto Novo Pumped Storage Power Station stands as a marvel of modern energy engineering. Located near the Douro ...



## Local energy from waste for greater Porto in ...

Jul 31, 2025 · Estelle Brachlianoff, CEO of Veolia, stated: "This contract perfectly embodies the ambition of our GreenUp strategic plan: to ...



## Two hybrid projects with more than 630 MWh of battery storage ...

Oct 29, 2025 · Two hybrid projects with more than 630 MWh of battery storage planned in Portugal Lightsource bp is planning an 867 MWp solar and 300 MWh battery energy storage ...



### [Pilot project for battery storage in Porto Santo , Kohesio](#)

Project co-funded by the EU - Other renewable energy (including hydroelectric, geothermal and marine energy) and renewable energy integration (including storage, power to gas and ...

### [Fluence 16.4MWh BESS inaugurated in ...](#)

Nov 17, 2022 · An aerial view of the battery storage unit on the Portuguese island. Image: A 15MW/16.4MWh battery energy storage system (BESS) ...



### **Portugal, Porto Santo to become world's first smart fossil ...**

Aug 26, 2020 · Hitachi ABB Power Grids has teamed up with Groupe Renault to deploy an energy storage system on the Portuguese island of Porto Santo, Smart-energy reports. The two ...



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