

How can Cape Verde meet its goal of 50% renewables?

Cape Verde can meet its goal of 50% renewables today by integrating energy storage. A 100% Renewable System is achieved from 2026, with a 20 year cost from 68 to 107 MEUR. Current paradigm doubles emissions in 20 years and costs ranges from 71 to 107 MEUR. The optimal configuration achieves 90% renewable shares with a cost from 50 to 75 MEUR.

When will Cape Verde's energy storage centre be operational?

During the presentation of the project, Cape Verde's National Director for Industry, Trade and Energy, Rito Évora, announced that the energy storage centre is scheduled to be operational by 2030, with the aim of injecting 7% of renewable energy into the national public grid and 18% into that of the island of Santiago.

What is the Cape Verde reference system (CVRs)?

The recently published Cape Verde Reference System (CVRS) has been used as the baseline for the present study. It details the topology and components of the networks of both Santiago and São Vicente islands, including load and renewable profiles. 2.1. Energy mix, challenges, and future plans

Does Cape Verde have a wave energy potential?

In the case of Cape Verde, there is one study evaluating the wave energy potential which highlights the resource available, particularly for the northern islands, such as São Vicente. Unfortunately, the study identifies the wave resource to match that of the wind.

Is Cape Verde a developing state?

The archipelago of Cape Verde is a developing state in West Africa with extreme external energy dependency on refined oil imports despite their available solar and wind resources. Aligned with the global energy transition, the local government established goals in 2011 aiming at 50 and 100% RES.

Where is Cape Verde located?

The archipelago of Cape Verde Located in the Atlantic Ocean at approximately 600 km from the westernmost point of continental Africa, Cape Verde is compounded by ten islands; nine of them inhabited by roughly 540,000 people. Their climate is usually regarded as semi-desert, more moderate than that of sub-Saharan Africa due to the oceanic influence.

Santiago Pumped Storage will increase Cape Verde's energy storage and electricity production capacity. The Santiago Pumped Storage Project, which will be located in Chã Gonçalves, in the municipality of Ribeira ...

generation expansion planning in favour of other flexibility-enabling energy system planning tools allowing

the integration of energy storage and sector coupling. Therefore, this paper proposes ...

In the context of the ongoing energy transition, holistic perspectives are required to transcend the, sometimes myopic, electrical domain focus in favour of integrated energy ...

One research team suggested that a system based on solar, wind and energy storage (as batteries and pumped hydropower) could meet Cape Verde's goals. It certainly has a wide range of options for ...

Cape Verde Energy System Cape Verde's energy sector is characterized by the use of fossil fuels (petroleum products), biomass (firewood) and small expressive use of other renewable ...

National Energy Plan - Energy Policy Plan for Cape Verde (Plano Energético Nacional - Plano de Política Energética da República de Cabo Verde), May 2003 (in Portuguese). [23]
Cost-benefit ...

The project was a huge success and to this day remains one of the most important and influential strategic studies in the energy sector of Cape Verde. The Renewable Energy Atlas includes the strategic identification of resource ...