

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 range from 71 to 107 MEUR. The optimal configuration achieves 90% renewable shares with a cost from 50 to 75 MEUR.

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 S#227;o 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 S#227;o Vicente. Unfortunately, the study identifies the wave resource to match that of the wind.

Why is Cape Verde's energy grid falling out of scope?

Nevertheless, we discarded this due to the fact that the grid in Cape Verde is currently in expansion and this process is expected to continue during the foreseeable future following criteria related to energy access and political will, rather than techno-economical feasibility. Thus, falling out of scope.

Why is solar a key driver of the renewable transition?

Solar is the main driver of the renewable transition, supported by wind and storage. In the energy transition context, islands are identified as particularly challenging regions due to their isolation, and energy dependence; while their excellent renewable resource and rapid growth makes them exceptionally interesting test cases.

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.

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investments in renewable energy, a ...

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Cabo Verde energy storage wiley

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