

# **Solar and off-grid energy storage in Costa Rica**





## Overview

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Can solar power diversify the energy mix in Costa Rica?

While hydroelectric power dominates the energy mix at approximately 80% of electricity production, solar energy, though currently a smaller contributor, holds significant potential to diversify and stabilize the grid. This paper investigates Costa Rica's renewable energy journey, emphasizing solar power's evolving role.

How is Costa Rica transforming its energy portfolio?

Costa Rica is taking bold steps to diversify its energy portfolio. The country is integrating wind, solar, and geothermal solutions to strengthen its power grid. These efforts aim to reduce reliance on any single source and ensure long-term sustainability.

Is solar energy a viable alternative to Hydro-heavy grids in Costa Rica?

Solar energy, while underexplored in Costa Rica compared to hydro and geothermal, has gained attention in recent literature. Smith and Paladino (2021) argue that solar photovoltaic (PV) systems offer a decentralized solution to complement hydro-heavy grids, reducing vulnerability to seasonal fluctuations.

Are solar panels a good investment in Costa Rica?

Solar energy has recently gained traction in Costa Rica, especially for residential and small business use. The abundant sunshine, particularly in dry regions like Guanacaste, makes solar panels an effective solution for individual homes and community projects.



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