

## Renewable energy integration in smart grid Costa Rica

Discover how Costa Rica's green transport revolution is driving energy integration. Learn how sustainable transport solutions are supporting the country's clean energy transition.

Costa Rica has been investing in renewable energy for 70 years, so its electricity matrix is very strong in renewables. Hydropower is the main source of our electricity, followed by wind, geothermal, solar and biomass.

In addition to being one of the world leaders in renewable energy production, Costa Rica continues to prove that it is one of the most progressive renewable energy policy makers, and are serious about their goal of carbon neutrality.

So far in 2021, 99.98% of Costa Rica''s electric power has come from renewable sources. Costa Rica has generated 73.39% of its energy from hydropower, 13.84% from geothermal sources, 12.12% from wind and ...

The governing board of the Climate Investment Funds (CIF) has decided to support energy integration investment plans for a total of USD 100 million (EUR 93.5m) by the governments of Costa Rica and Fiji.

At full implementation, Fiji plans to increase renewable energy generation capacity by 40MW and provide an additional 91,104MWh of renewable energy output per year by 2026; connect 200,000 people to the grid; provide 7,000 Fijians on the outer islands with more affordable, reliable, and clean energy by 2026; and reduce emissions by 50,000 tCO2e ...

This fusion enables the efficient use of renewable energies which is a key challenge for now. The present review paper attempts to investigate the role of smart grid in the renewable energy. The introductory section sets the role of renewable energy and distributed power in a smart grid system.

The map displays the resources and energy infrastructure of the region as of 2022. Data is available for mining, electricity generation capacity, natural gas and oil infrastructure, as well as the vulnerability of these resources and energy supply infrastructure to climate impacts in the region.

Despite that Costa Rica's central government is in charge of developing national energy and transport policies and regulations, there is large technical potential for decarbonisation in cities, given that 75% of the country's population lives in urban areas.

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