

Solar photovoltaic power generation prices in Benin





Overview

About 60.0% of Benin's population currently lacks access to reliable electricity to perform their daily activities. The Benin Republic has abundant solar energy resource, which could be harnessed efficiently t.

How much does a photovoltaic power plant cost in Benin?

Photovoltaic power plants' levelized cost of energy ranges from 0.11 USD/kWh to 0.125 USD/kWh. Incentives and subsidies could lower the levelized cost of energy and increase solar photovoltaic investment in Benin. About 60.0% of Benin's population currently lacks access to reliable electricity to perform their daily activities.

Can solar power improve living standards in Benin?

The Benin Republic has abundant solar energy resource, which could be harnessed efficiently to increase its access rate to electricity and improve living standards. This study evaluates the techno-economic viability of installing a 10.0 MW utility-scale grid-tied solar photovoltaic (PV) system in seven cities located in Benin.

Are solar PV projects feasible in Benin?

This study considers a 10.0 MW grid-tied system in seven different regions to evaluate the feasibility of solar PV projects in Benin. Grid-connected solar PV systems have two main components: the PV array and the inverter. The connection to the national grid is done using appropriate inverters that must be carefully selected (Etier et al., 2015).

Could a solar power plant increase Benin's electricity rate?

Based on this current data, it can be deduced that using the 10.0 MW solar power plant for electricity generation could increase Benin's electricity rate by about 1.8%. This means that putting in the 10.0 MW at all the suggested sites could give about 12.0% more people access to electricity.

Could incentives and subsidies increase solar PV investment in Benin?



The findings show that incentives and subsidies could lower the LCOE and increase solar PV investment in Benin. Investing in utility-scale PV systems could help Benin increase its electricity access rate and mitigate greenhouse gas emissions for sustainable development.

What type of energy is used in Benin?

The evolution of the electrical mix of Benin indicates that, in 2020, natural gas was the first form of energy used to produce electrical energy, representing a proportion of 71.63%. Solar photovoltaic (PV) accounts for 0.30% of the mix by form of energy compared with 1.36% in 2016, as shown in Fig. 3.



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A review of solar photovoltaic incentives and Policy: Selected

Solar photovoltaic systems are also the most suitable energy generation systems for these needs. In this context, interest in solar systems is increasing day by day and solar ...

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ENERGY PROFILE Benin

mix of fossil fuels. In countries and years where no fossil fuel generation occurs, an average fossil fuel emission factor has been used to calculate t countries and areas. The IRENA statistics ...

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[Benin Solar Energy Market \(2025-2031\) . Analysis & Companies](#)

Market Forecast By Type (Solar Photovoltaic (PV), Solar Thermal), By Application (Power Generation, Heating) And Competitive Landscape Report Description Table of Content

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Global Trends in Solar Power

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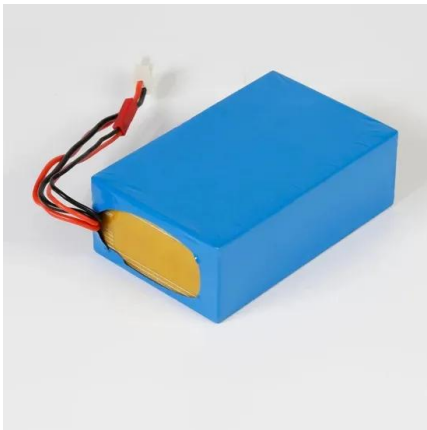


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Benin initiates the construction of four photovoltaic power plants ...

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