

Benin Wind and Solar Energy Storage Power Station

How can Benin increase local production?

However, the government of Benin is making serious efforts to increase local production through national projects, specifically the Solar Energy Promotion Project (PROVES) and the Renewable Energy Development Program (PRODERE). The principal RE sources in Benin are hydro energy, biomass energy, wind energy and solar energy.

How can bioenergy contribute to the energy sector in Benin?

In addition, the Vossa hydroelectric power plant of 60.2 MW is to be built with an annual production capacity of 188.2 GWh. An additional hydroelectric plant is planned to be installed in Bétérou to increase the national electricity production in Benin. Bioenergy can also play a crucial role in the energy sector in Benin.

Does wind energy contribute to the electrification of Benin?

Although hydroelectricity, biomass and especially PV technologies play an increasingly important role in the electrification of Benin, recent studies have shown that wind energy technologies can also contribute. Non-electrified rural and peri-urban localities have favourable wind potential in coastal Benin.

Does Benin have a green energy policy?

To provide clean energy at a lower cost to their citizens, all nations of the world are striving to increase their energy production in an environmentally friendly way. Benin has also joined this dynamic by considerably increasing its green energy production efforts in recent years.

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.

What is the energy sector strategy in Benin?

In Benin, the energy sector strategy is aimed at improving the energy independence of the country and diversifying its sources of supply through the implementation of various interconnection projects with neighbouring countries and the enhancement of the national RE potential.

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This study considers RE technologies, including solar PV, concentrated solar power (CSP), hydropower, and wind energy, for developing the scenarios. The study considered ...

Co-locating energy storage with a wind power plant allows the uncertain, time-varying electric power output from wind turbines to be smoothed out, enabling reliable, dispatchable energy for ...

