

**SolarInnovate Energy Solutions**

# **Guinea-Bissau grid-side energy storage system**



## Overview

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This work studies the implementation of an isolated microgrid activated with photovoltaic energy and energy storage in batteries under the case study of the community of Bigene, located in the African country of Guinea-Bissau. How sustainable is the electricity sector in Guinea Bissau?

The electricity sector in Guinea Bissau is in the midst of a transformational reform towards a sustainable development characterized by reliable, greener and affordable service delivery.

How will solar power work in Bissau & Gabu?

In Bissau, solar photovoltaic (PV) plants will help reduce the average cost of electricity in the country and diversify the energy mix, while battery storage will help integrate this variable energy source into the grid. In Bafata, Gabu and Cacheu, the PV plants will provide cheaper and cleaner local power generation than current diesel production.

How much money is needed to achieve universal electricity access in Guinea Bissau?

8. Around US\$ 263 million of public and private funding will be needed to achieve universal electricity access in Guinea Bissau by 2030. To achieve this goal, a combination of grid (70%) and off-grid (30%) solutions will be required to bring 400,000 additional new connections<sup>18</sup>.

Does Guinea-Bissau have electricity?

Guinea-Bissau has one of the lowest electrification rates in Sub-Saharan Africa with only 29 percent<sup>2</sup> of the population -around 53 percent in urban areas- having access to electricity (Figure 1).

Will ECOWAS OMVG boost electricity access in Guinea-Bissau?

The associated ECOWAS regional access project will boost electricity access in Guinea-Bissau to 39 percent<sup>16</sup>. The OMVG will have around 300 km of a 225

kV transmission line in Guinea Bissau, and four high-voltage 225/30 kV substations (Mansoa, Bissau, Bambadinca and Saltinho).

Can solar power be developed in Bissau & Bijagos?

An additional 30 MW of solar PV in Bissau, 36 MW in countryside cities and two solar PV mini-grids in the Bijagos islands could be developed according to a feasibility study completed in April 2020 with the support of the World Bank and ESMAP.

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### **Guinea-Bissau's Electricity Planning to Provide Access to ...**

Jun 2, 2025 · Guinea-Bissau has a single public energy concessionaire, EAGB (Electricity and Water of Guinea-Bissau), which is responsible for the transportation, distribution and trading of ...

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