

## **SolarTech Power Solutions**

# **Can Côte d'Ivoire undertake energy storage projects**



## Overview

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The Côte d'Ivoire government has announced that a lithium-ion battery energy storage system will be installed at the first-ever mega solar project in the country. Will Côte d'Ivoire have a low-cost solar system?

In the case of a low-cost solar scenario, PV capacity is up to 24 GW and storage is nearly 15 GW between 2030 and 2050. In closing its economic gap with emerging markets, Côte d'Ivoire will face a substantial increase in electricity demand over the next three decades.

Does Côte d'Ivoire have a commitment to green energy?

According to its National Determined Contribution (NDC) of 2015, the share of green energy in the electricity mix is expected to reach 42% and greenhouse gas (GHG) emissions from this sector are not expected to exceed 9.2 Gt of CO<sub>2</sub> eq in 2030. To date, Côte d'Ivoire has not made any other quantitative commitment beyond 2030.

Does Côte d'Ivoire export electricity?

Côte d'Ivoire is the third largest electricity market in West Africa and has historically been a net exporter of electricity with 11.8% of its total electricity generation sold to Mali, Burkina Faso, and Ghana in 2019 (ANARE-CI, 2020).

2.1.2. Future cost assumptions Fig. 2 presents the long-term cost assumption for our analysis.

Will Côte d'Ivoire have a coal-fired power plant?

These aspects are left for further research. This coal-fired power plant is expected to be the first ever built in Côte d'Ivoire. Note that the implicit price of carbon for the other scenarios is not worth studying because they show CO<sub>2</sub> emissions in 2050 below the Paris Agreement target.

Should Côte d'Ivoire use natural gas?

As previously states, natural gas has the advantage of a well-structured and

familiar decision-making process and value chain in Côte d'Ivoire. As suggested by Fig. 14, if we compare the UGEM to the UGEM 60gas, gas would take the place of solar and partly of coal, which would further reduce the total capacity to install.

How much energy does Côte d'Ivoire consume per capita?

In the same period, annual consumption per capita went from 174 KWh to 277 KWh (AIE, 2014; A NARE-CI, 2017). However, as of 2014, per capita consumption in Côte d'Ivoire is 43% lower than the average for sub-Saharan Africa and 91% lower than the world average.

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