DJERMAYA

Location
Djermaya, Hadjer-Lamis region, **Chad**

PROJECT SUMMARY

Ambitious plans for an estimated 25MW (AC) grid-connected solar PV power plant in Chad could catalyse the transformation of the country's inadequate and entirely fossil-fuel based energy system, and help to alleviate poverty.

Despite numerous financial and geopolitical challenges associated with the project, REPP has committed a EUR 380,000 development loan to Smart Energies International on the strength of the enormous positive impact the success of the project would have on Chad and its people.

Today, Chad is one of the world's poorest countries and has just 315MW installed power generation capacity, the vast majority of which is reliant upon heavy fuel oil, diesel and natural gas. As of 2018, only 10% of its population was connected to the national grid. The project therefore plays a significant role in increasing energy security and resilience to climate change.

At the same time, the country experiences exceptional levels of solar irradiation, creating significant potential for solar energy generation. For this project, the developers have secured a site in the Hadjer-Lamis region, 30km north of the capital city of N'Djamena, with an estimated irradiation value of 2,191 kWh/m2.

Once built, the solar plant will contribute significantly to Chad's conditional nationally determined contributions (NDC 2017) target to reduce greenhouse gas emissions by 71% by 2030. It will also help alleviate poverty in the country by providing power to the grid at a lower cost than fossil fuel-fired generation, meaning the government can reduce its subsidies to the energy sector and focus its limited resources on other vital services such as infrastructure, education and health. The project will also create 250 jobs during construction, and 12 permanent positions during the operational phase.

In October 2019, the African Development Bank (AfDB) approved EUR 18m senior debt to support the construction of the project.

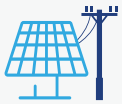
As of the end of March 2022, all financing documents for the project had been signed and financial close is expected by the end of Q4 2022. Technical reports have all been completed, financed by REPP's technical assistance, and an ESIA and livelihood restoration

Country policy alignment

Supports Chad's conditional Updated NDC (2021) target to reduce GHG emissions by 19.3% by 2030. Project will help alleviate poverty and foster economic activity by providing lower cost power to the grid than fossil fuel-fired generation, thus contributing to Chad Vision 2030's (2017) target of becoming an emerging country. Djermaya has been identified as a priority project in the Emergency Plan for Access to Electricity 2021-2023 (2020).

AT A GLANCE

Technology:
Grid-connected solar PV



Project type:
Greenfield, grid-connected

Offtaker:
La Société Nationale D'Electricité (SNE), Chad's national utility

KPIs

GHG emissions avoided: 39,683 tCO_2e per year

Improves stability of grid supply

MW Planned capacity: 25MW (AC)

FUNDING STRUCTURE

Signed: 2 May 2018

Type: Development loan

REPP funding: EUR 380,000

SDGs

"The energy needs are very important in Chad – needs mostly satisfied today by polluting energies. In a country with strong sunlight like Chad, solar energy appears as a great means to expand access to clean energy. We are happy to contribute to its deployment in Chad."

Hugues Antoine Guinoiseau, Director of Smart Energies International

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