

# 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 to 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 125MW installed power generation capacity, all of which is reliant upon heavy fuel oil and diesel. As of 2016, only 8.8% 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/m<sup>2</sup>.

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 2021, the project was advancing towards financial close, with the site secured, a tariff agreed with the off-taker, a PPA signed and a PCOA materially agreed. Technical reports have all been completed, financed by REPP's technical assistance, and an ESIA and livelihood restoration plan have also been established.



### Country policy alignment

Supports Chad's conditional NDC (2017) target to reduce GHG emissions by 71% 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:

Liberia Electricity Corporation (LEC)

## KPIs



GHG emissions avoided:  
39,683 tCO<sub>2</sub>e per year



Improves stability of grid supply



Installed capacity:  
25MW (AC)

## FUNDING STRUCTURE

**Signed:** 2 May 2018

**Type:** Development loan

**REPP funding:** EUR 380,000

## SDGs

7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



17 PARTNERSHIPS FOR THE GOALS



*"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*