

ARC POWER RWANDA



Location
Rwanda

PROJECT SUMMARY

The first phase of an ambitious scheme to erect a large portfolio of mini-grids in Rwanda is under way after its British-based developer secured a £600,000 convertible loan from REPP.

As of February 2020, REPP's critical early-stage support for the project had enabled ARC Power Ltd to complete six out of an initial eight installations in Bugesera District already, connecting 2,345 people to electricity for the first time.

Following successful completion of the eight mini-grids,, ARC Power intends complete the construction of the second and wider roll-out of the project, which will boost the total generating capacity from 0.12MW to 3.5MW.

Energy from the mini-grids is being offered on a pre-pay, pay-as-you-go basis to off-grid communities currently with no access to clean energy, and who mostly rely on more expensive and polluting sources of energy such as kerosene for lighting.

The portable and modular mini-grids were developed by ARC Power and can each connect between 100 and 600 households or businesses in a village, providing productive-use, A/C power for lighting and mobile charging, as well as the ability to use appliances and machinery, enabling the development of small businesses. The modular nature of the units also allows for increased capacity to be added following the initial installation, ensuring that supply can be ramped up in line with demand.

Nearly 50 jobs have been created so far during the initial phase, with the full project forecast to result in 200 jobs during construction and a further 40 during operation. Once completed, the mini-grids will provide enough clean electricity to meet the needs of more than 160,000 people living off-grid in Rwanda, which currently has an estimated national electrification rate of 30%, and just 12% in rural areas.

The Rwandan government, which has set a target to provide universal energy access by 2024, is seen as a keen supporter of the project and of private sector involvement in the country more generally. If successful, the project will prove the case for large-scale off-grid solar PV solutions in Rwanda, and catalyse interest from the commercial sector.

AT A GLANCE

Technology

Solar PV
mini-grids



Project type

Off-grid

Offtaker

Off-grid
communities

KPIs



Greenhouse gas emissions avoided: Phase 1: 263 tCO₂e p.a., whole project: 7,665 tCO₂e p.a.



People with new energy access: Phase 1: 5,625, whole project: 164,000



Installed capacity: Phase 1: 0.12MW, whole project: 3.5MW

FUNDING STRUCTURE

Signed: 18 February 2019

Type: Convertible loan

REPP funding: £600,000

SDGs



"We have huge ambitions for ARC Power in Rwanda. The funding from REPP will allow us to press forwards with our national rollout, providing affordable, reliable and clean power to around 160,000 people in these next two phases."

Karl Boyce, CEO, ARC Power