



## EnDev Results-based Financing Facility (RBFF)

### Solar PV Hybrid Mini-Grids, Kenya

Country	Kenya
Technology	Solar PV Hybrid Mini-Grids
Project duration	07/2014 – 03/2020
Budget	€ 2,090,000
Implementer	Barclays Bank of Kenya
Targets	<ul style="list-style-type: none"> <li>• 7,000 people with improved access to clean energy services</li> <li>• 14 mini-grids developed</li> </ul>

The Mini-grids RBFF project is funded by the UK Department for International Development (DFID) and implemented by Energising Development (EnDev), a programme executed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Barclays Bank of Kenya (BBK) is the project fund manager with technical support from GIZ. The primary aim of the project is the facilitation of market entry for private sector into Green Mini-Grids (GMG) business in Kenya, and particularly in providing electricity to off-grid households, social infrastructure and SMEs in remote rural areas.

#### Project Approach

Currently, about 75% of the Kenyan population has access to grid and off-grid electricity. In remote counties, far away from the national grid this figure falls to as low as 20%. The Kenyan Government has a target to achieve universal access in the country by 2022. However, extension of the grid to serve citizens in far-flung off-grid settlements is very costly and not economically feasible. The government is therefore considering solar home systems and mini-grids for these areas as the most appropriate solutions to meet its electrification target. The public as well as the private sector will play a key role in development and operation of the mini-grids.

Kenya is in the process of putting mini-grid regulations in place in order to facilitate private off-grid and on-grid mini-grids investments. The RBFF aims at increasing the profitability of Solar PV Hybrid Mini-Grids (SHMGs) under the current challenging regulatory framework by incentivising project developers risks. When in place, the regulations will ensure sustainable mini-grid development and operation by the private sector even after closure of the RBFF.



*A 44 kW<sub>p</sub> solar hybrid mini-grid project implemented by NAL Off-grid Limited in Naduat, Turkana County through the RBF support.*

**Incentive Structure**

The Mini-grids RBF project offers performance-based financial incentives to private firms to develop and operate mini-grids that supply electricity to customers in areas far from the national grid.

The key feature of RBF is the provision of financial incentives in the form of grants upon verified delivery of pre-agreed, clearly defined and measurable results. Results incentivized include:

- i. Successful construction, commissioning and operation of the mini-grid
- ii. Customers connected and maintained for at least 3 months.

Participating companies take full investment risk and pre-finance their projects, through private equity and/or debt. Incentives are paid out only after verification of results.

The maximum incentives a developer can receive is 50% of the mini-grid project cost, this is calculated to lower

the end user tariffs to affordable levels based on data collected at feasibility studies of the mini-grid sites.



*Community sensitization in Kataboj, Turkana County which is one of the sites developed under RBF.*

**Achievements and Outlook**

The Mini-Grids RBF targets to facilitate the implementation of 14 mini-grids in rural Kenya through 4 private sector companies with a combined solar PV component size of more than 450kW, meaning about 250 Tons of avoided CO2 emissions per annum. The target connections to households, businesses and institutions in these 14 villages will be about 1,400 translating to approximately 7,000 direct beneficiaries (5 people per household). All the 14 mini-grids will be located at the central trading centres of these villages to connect small and medium enterprises/businesses as well as public & social institutions (schools, health centres, social halls, churches, etc). More than 100,000 people who are living in and around these villages will therefore benefit from the mini-grids projects through access to goods and services powered by clean energy. The project developers will own and operate the mini-grids for at least 20 years, with the aim of increasing system sizes, number of connections, as well as expansion to neighbouring villages.

Funded by:



Political partner:



Coordinated and implemented by:

