



Upscaling Mini-grids for Least Cost and Timely Access to Electricity Services

SREP round table

KENYA

February 9, 2017



Country background

- Kenya is one of the East African countries and borders Ethiopia, Somalia Tanzania, Uganda & Sudan
- Kenya's current constitution was enacted on 27th August 2010 replacing the old one that had been in place since Kenya's Independence in 1963
- According to the Kenya National Bureau of Statistics,
 - the estimated current population based on the 2009 population census is about 43 Million people
 - The economy growth in 2016 was 5.7%
 - Electricity consumption in June 2016 stood at 7,912 GWh
 - Installed Electricity Generation capacity by June 2014 was 2,341 MW while Electricity Generation was 9,816 GWh.



Project outline

- This is a mini grid project under the Kenya Electricity Modernization project (KEMP) to be implemented at a cost US \$ 10Million financed by IDA. REA is the implementing agency
- It will support the implementation of off-grid electrification solutions in areas whose connection to the national grid is not viable in the short and medium term.
- Electrification of those areas will be implemented through mini-grids supplied by hybrid generation systems, combining renewable resources (solar) and thermal units running on diesel.



Project outline

- Six (6) locations potential locations have been identified - Mageta Island, Siaya County; Ngodhe and Takawiri Islands in Homa bay County; Shimoni Island in Kwale County; Chardende in Tana River County and Kadaina Island in Kilifi County.
- The approximate prospective users in these locations range from 150-400 and approximate demand is about 250-500kVA in each of the 6 locations
- The project is expected to be completed by December 2018



Status

- Project Financing Agreements have been signed between IDA and the Government of Kenya. The financing is from IDA and the SREP Grant
- The Subsidiary Agreements under the IDA funds and under the SREP funds have been signed.
- The project implementation unit has been established in REA
- Recruitment of consultants to carry out preliminary designs for the projects and also consultants to carry out ESIA have been done. These consultants are expected to carry out the assignments from February 2017
- Recruitment of a transaction advisor to assist in the implementation of the project is in progress.
- REA has also requested the respective county Governments to provide land for the implementation of minigrids



Issues

- Four (4) additional sites have been included in the ESIA and Preliminary design so as to increase the sample size for the selection of the sites to be implemented.
- The additional sites are Kaeris and Kerio markets in Turkana County and Illeret and Dabel markets in Marsabit County
- Inclusion of Private sector in Mini Grids - Regulatory Framework and Business Model
- Technical Standards
- Financial Compensations – Subsidies?



Questions on moving forward

- Electrification level is still low . Additional financing should be availed to support electrification of more renewable mini grids as a substantial number of the population does not have electricity especially in the underserved regions of the country
- The World Bank is supporting the country in identification of the more potential areas for establishment of the mini grids through geospatial mapping.
- Electrification in these areas will be through renewable energy mini grids and stand alone renewable energy systems
- Electrification Strategy – Being undertaken