EEP
ENERGY AND ENVIRONMENT PARTNERSHIP / SOUTHERN AND EAST AFRICA

OFF GRID ELECTRIC: SUCCESSFUL RURAL ELECTRIFICATION USING SOLAR PV HOME SYSTEMS

"Off.Grid:Electric is a leader in the field for using mobile money to sell solar power as a daily service at an affordable price. But service doesn't just mean the power itself. It also means exceptional customer service, including an all-day customer care telephone line and ongoing support from a local agent. With more than 10,000 homes taking up the service so far, as fast as systems are manufactured they are off to customers – thanks to a sophisticated app-based customer registration and product tracking system"

(2014 Ashden International)

Off Grid Electric was selected as one of the winners in 2014 Ashden International awards in London last year. The company was awarded with Citi Ashden Award for Innovative Finance in the international category.

Off Grid Electric, M-power: Community Access to Energy, Arusha, Tanzania

Off Grid Electric is an American project developer that approached EEP for funding of their expansion in prepaid solar home systems to communities in the Arusha region. The prepaid solar home systems are supplied in two sizes 3V and 12V and come from Fosera Ltd. The payback of these systems are expected to be within 1-2 years and with an expected lifespan of 10 years. This was a large scale up project that used a high fraction of partner funding. The team is comprised of very successful business people and have teamed up with one of the world renowned pico-solar technology developers in the field, Dr. Peter Adelmann. The project developers chose Arusha Tanzania for its friendly people and stable economic environment to start off the business. The developers moved to Arusha to implement the project with their families, which indicates a high level of commitment to make it work. What is impressive is the detail into which the risk assessment was done and how relevant all the risks and mitigations were.

The initial target was to scale up the basic business idea to reach a client base of 10 000 households. Emphasis was placed on "dukas" or retail outlets to promote the technology and form a sales network and a base from which to do maintenance. The project was expected to run from June 2013 to March 2014 for 9 months and had an initial project budget of 1,043,520 Euros with a contribution from EEP of 198,000 Euros.

The main barriers to entry were defined as the financial risk of investing in new technology and the cash flow of the end user that has to adopt the technology as well as service delivery and peace of mind so that the technology can be kept operational. Making it a mobile pay as you go system allowed for affordable payment of the system over a longer period and ensured noticeable savings to the end user (as weekly kerosene and other charging expenses can be measured up against the weekly SHS charge). Also, the setup of a strong local support and maintenance group made sure units in the field were repaired and replaced if necessary in due course to prevent bad reporting of the technology and negatively impact growth. The original proof of concept was done in Aug 2012 – Feb 2013: 100 to 1,000 households. The EEP project was aimed at scaling up from 1000 – 10 000 Households.

The project is underpinned by the affordability of the system compared by previously used fossil fuels or grid connection. This ensured that at least on the most basic of economic levels this project makes sense for the developer and consumer in a win-win interaction.

What really happened:

The implementation was a booming success. The number if installations at the time of the ECO team's visit to the site in Nov 2014 was 31 017 and increasing rapidly to the next company target of 100 000 units across Tanzania. The product offering has also been revised to include a larger range of units. Defaults on payments are low due to the prepaid system in place and many people are employed as either permanent support staff, agents or local service points. The number of people employed increases with the growth of the business. They have spread to Mwanza, Kilimanjaro, Moshi, are targeting the rest of Tanzania for 2015. Longer term they aim for Rwanda and Kenya in the future. Support through a call centre processing 15 000 calls per month has been setup for rapid support. Off Grid had also established an academy, providing high quality sales and management training for hundreds of young Tanzanians.

Lessons Learnt:

The first lesson learnt that is key to the success of this project is the concept of mobile money banking and payment. This allows for convenient and controlled repayment for the electrification services. Good insurance and mobile money partners made this possible with a good selection of the impact area to kick off with (Arusha has got an economic environment suitable for growth with good cellphone coverage).

Good technology and business development role players allowed for strategic thinking and rapid expansion using a distribution model of small 'Dukas' and agents on motorcycles to keep the cost of sales and servicing down and time efficient.

This ties in with the final factor which is the high quality of service provided and the call centre availability to ensure high customer satisfaction level and to ensure that the product can be optimised with technology revisions to address recurring customer needs and problems.