

June Webinar: Lessons learnt from RBF models in promoting access to clean energy services in Kenya - Q&A summary

Beneficiary recruitment

How did you recruit companies into the project?

The project beneficiaries were selected through a competitive approach. The opportunity was advertised and open to all eligible organisations and all applicants evaluated against predefined eligibility criteria. The final selection process involved physical due diligence and only those successful at this stage proceed to sign contracts with the project.

Did you observe particular patterns in private sector uptake? Was participation limited for larger companies?

The application for the solar and cookstoves RBF was open to all organisations dealing in these products regardless of whether large or small, so long as they met the project's eligibility criteria.

The observed patterns included the following:

- a) Distributors preferred to apply directly as the lead applicants indicating that RBF would be used more towards supply and demand creation activities. The initial plan/target was to have financial institutions as the lead applicants but in partnership with distributors.
- b) There was more interest from the distributors than from financial institutions, mainly due to the technical aspects and the lending risk perceived by the financial institutions.
- c) The project had a component providing incentives to financial institutions willing to provide credit to the small-scale traders, but there was no interest/uptake of this facility, mainly due to the anticipated ticket sizes and the associated lending risk profile of the small-scale traders.
- d) The project had a component providing incentives on cooking fuels, specifically pellets, but there was no uptake due to a corresponding low interest on the more expensive gasifiers.
- e) Interest from established financial institutions e.g. banks providing asset financing was low

Do you check for e-waste management in the selection process?

The project scope and criteria did not include e-waste management. This however came up during implementation and identified as a necessary intention area/recommendation for subsequent interventions. However, under the mini-grids project, developers were required to conduct ESIA and obtain EIA permits from NEMA. The environmental management strategy in these reports contained e-waste management.

Community engagement

Who were your target beneficiaries and were you successful in reaching the poorest and most remote communities?

The project promoting solar lighting and improved cookstoves for use by households provided market development incentives to financial institutions, NGOs and distributors to enhance last-mile distribution in rural and remote areas. As part of the strategy to enhance reach to the poorest and remote communities, the projects (both stoves and solar RBFs) included all marginalized counties in Kenya where the beneficiaries successfully distributed 25% of solar systems and 6% of stoves incentivized by the project. Furthermore, the RBF projects also targeted companies or financial institutions providing appropriate credit or flexible payment solutions to facilitate the affordability of the products.

Which proportion of funding should be allocated to Technical Assistance (TA) so that it is practical for effective implementation?

This should be informed by an assessment at the project design stage depending on a number of factors such as the size of the RBF fund, the implementation model, the nature of products/technology being promoted, the implementing partners involved in the project and their need to TA.

How do you support supply chain maturity in remote areas?

Mainly through the design of the incentives scheme. The project reserved at least 30% of the remaining incentive fund after the first year of implementation for marginalized areas to encourage and reward market expansion to remote counties. The selection of these marginalized counties was according to Kenya's Commission of Revenue Allocation (CRA) <http://www.crakenya.org/wp-content/uploads/2018/06/CRA-37-Second-Policy-on-Marginalised-Areas-June-16th-2018.pdf>. The incentive rate was also higher for these marginalized counties with Turkana County having the highest of 25%.

How do you support customer engagement and address affordability issues in rural communities?

The RBF incentive was designed to support financial institutions and distributors of solar and cookstoves to develop or scale up affordable and flexible credit/payment schemes for the end-users. The reported use of RBF incentives included consumer awareness creation, promoting access/uptake of consumer credit and enhanced after-sales support including automation of customer call centres, data/inventory/credit tracking and management system and the enhanced administration of warranties and repair of faulty products.

Women empowerment - what did you do to promote women's employment of 40% (solar and stoves RBF)?

This was achieved through recruitment and training of the last mile distribution network. The jobs created included distribution management staff, sales agents and technicians. The project tracked additional employees (disaggregated by gender) recruited and trained by the beneficiaries. Employment creation disaggregated by gender was therefore a key performance indicator.

Sustainability & project legacy

How have RBFs affected market development beyond the number of systems distributed? Have you seen any evidence in market shifts in terms of pricing, distribution systems, and product awareness?

The project intends to undertake an end-term evaluation to assess projects' impacts. However, through the progress reported by the beneficiary organisations, a number of positive results emerged from the use of RBF incentives. The reported results include the following for solar and cookstoves:

- Growth of quality products with over 10 higher tier stoves (above tier 2) promoted across the country from an initial three in 2016, ranging from biomass and non-biomass cookstove which included wood, charcoal, ethanol, LPG, and briquettes. The project facilitated the sale of quality solar powered systems based on Lighting Global certification standards encompassing 17 LG associates. This included 51 product options, some with varied sub-options based on the number of lights, the addition of accessories (also optional in some cases) and/or the size of accessories such as the size of TVs.
- The project contributed to increased market coverage and expansion of distribution networks through expansion to new counties, deepening outreach within counties of operation, recruitment and training of field sales agents and group-based promoters, market entry research, awareness creation and marketing including activation of dormant markets, and provision of incentive schemes to enhance sales performance.
- High uptake of PAYGO models: the project incentivized alternative end-user financing mechanisms bridging the affordability gap and enabling end-users to purchase solar and stove products
- There was also the notable transformation from entry-level solutions to advanced, more expensive multifunctional solutions and an indication of that the market was moving up the energy ladder
- The variety and functionality of the products/solutions were enhanced.
- Enhanced business operations capacity and credit management. Some of the beneficiary organisations were able set up and/or automate service centres and recruited new staff and technicians. They were able to train, and build the capacity of their staff,

agents and even purchase equipment to improve transport and communication, and improved business management systems.

Do you continue to monitor the project results beyond project closure?

The project intends to undertake an end-term evaluation of the projects to assess the impact of the project

Data issues

How was the data collected?

The contractual agreement required each beneficiary organisation contracted by the project to report end-user sales on a monthly basis including verifiable customers' details. The project had developed reporting templates to aid in this process. Validation checks were made to ensure the completeness of the information provided to facilitate verification and calculation of incentives payable to the beneficiaries.

Why was data collection difficult?

Verifiable sales data was a requirement for an organisation to benefit from the incentives. The beneficiaries had to ensure the use of effective and credible data management systems to avoid the risk of losing RBF incentives. Nonetheless, there were frequent cases of data quality issues including incomplete data sets, and duplicated records, especially where organisations had poor data management systems. This effectively reduced the amount of incentive even where sales were genuine and/or resources already spent, therefore, disadvantaging the beneficiaries.

Some beneficiaries, especially the regulated financial institutions, had limitations resulting from regulatory or organisational policies affecting the extent to which they could disclose customer-specific information like names, telephone numbers, or identity card numbers, which were crucial for end-user sales verification. Effectively, the beneficiary organisations could not benefit from the RBF incentive scheme under such circumstances.

Some beneficiary organisations also struggle with managing their data due to a lack of internal capacity. There were instances of delayed reporting which posed a problem especially when tracking depletion rate of incentive fund and preparation for verification process

What improved data quality over time?

The project continuously supported beneficiaries during the implementation of project activities through needs-based and ad hoc on-site visits as well as periodical beneficiary forums. This mainly entailed capacity building to enhance data management and reporting based on the gaps identified for each specific beneficiary. The results were reflected in the

improved data quality over time. Since the payment of incentive was dependent on verifiable sales data, some organisations had to invest in reliable and automated data management systems which enabled them to track and report data in a more credible and verifiable manner.

What data were you measuring and what were the results?

We were mainly measuring the additional sale of solar and stove products to households as a basis for RBF incentive payments. The incentive was payable for units sold above a performance baseline pre-agreed for each beneficiary at the start of the project.

The project in addition tracked other market development indicators such as market expansion, job creation, credit provision and customer service. Both projects managed to achieve set targets.

Solar

Were the incentivised products (solar lamps, cookstoves) fully subsidised by the RBF scheme? Can you share your thoughts regarding market distortion due to introduction in the market heavily subsidised solar products in non-marginalised regions in Kenya?

The RBF incentives were not going into subsidizing the end consumer prices for the respective technologies. It was mainly geared towards subsidizing the company's operational costs to mitigate some of their market barriers. Besides, we didn't see any company reducing their products' prices based on the RBF incentives received during the verification process. The product prices were pegged on the prevailing market prices throughout the project from start to the end, hence the same across the board both for companies participating in the project and those that were not.

How did you determine incentive per Solar Lantern because different lanterns have different lumen-hour ratings?

The project promoted access to Lighting Global (LG) certified solar lighting systems (plug and play) for use by households, including lanterns and solar home systems. However, the products should meet a minimum threshold of at least lighting and phone charging with a minimum light output of 60 lumens per bulb and/or minimum total light output of 100 lumens per solar home system. The maximum incentive per product was graduated based on the products' tenure periods and minimum specifications such as panel size (>20Wp); total light output (> 400 lumens); light output per lamp (> 100 lumens); multiple lights (at least 3 lighting points) and functionality (in addition to mobile phone charging, the system should also power other devices (e.g. radio and/or TV)). Furthermore, the incentive was a percentage of a product's unit price, the size/functionality of the solar products is also reflected by the difference in pricing.

Why did the Microfinance Institution (MFIs) engagement not work on the solar project?

Generally, the financial institutions were the least performing over the total project period, benefiting from only 5% of the total paid incentives. This was attributed to a number of reasons (a) The MFIs were mainly focused on their core business in the finance sector and therefore the distribution of solar products was not a priority, (b) Energy lending was not a key priority when compared to other credit products, and (c) The MFI credit requirements and procedures were less competitive compared to PAYG models. However, there was an outstanding case of an MFI who registered remarkable results appearing among the top five best performing beneficiaries in non-marginalised counties. This was attributed to a more strategic focus on energy lending reflected in their implementation approach including the design of clean energy loans, strategic partnerships with distributors, and investment in robust digital loan and inventory tracking system with RBF incentives.

Stoves

How did you ensure continued use or adoption of the cookstoves?

Through the support of the project, beneficiaries were able to ensure continued adoption through activities such as awareness creation and marketing. To enhance their distribution network, beneficiary organisations forged partnerships with last-mile entrepreneurs/ agents who have played a great role in enhancing product availability. They also provided agents and staff incentives to motivate them and enhance their performance.

What was the tier of modern stoves promoted and were woodstoves included?

The project promoted uptake of higher tier stoves based on the International Standards Organisation-International Workshop Agreement (ISO-IWA). Stoves were promoted over the implementation period comprised of charcoal, wood, ethanol and Liquefied Petroleum Gas (LPG). The minimum criteria based on the evaluation standard is as indicated below.

Parameter	Criteria
Indoor emissions CO (gram per minute (g/min))	<0.62
Indoor emissions PM (milligram per minute (mg/min))	<17
Safety	>75%
Thermal efficiency (%)	>25%

How did you manage ICS user credit system?

The ICS user credit system was managed fully by the beneficiary organisations. The organisations were expected to only report credit sales made to the project which would be verified.

What was the challenge during RBF ICS implementation?

The project initially targeted financial institutions as the main drivers of the project. The MFIs were mainly focused on their core business as a financial service provider with low interest in providing asset financing, hence majority of them were dropped from the project earlier. This forced the project to re-assess and open up to other beneficiary organisations.

Limited types of stoves promoted on the project affected performance since there was less variety. However, this changed over time with the introduction of more technologies onto the project.

The verification process was a key challenge, characterized by changes within the IVA team which resulted in delays in verification. The delay and prolonged verification exercise resulted in delayed disbursement of incentives to the beneficiaries.

Solar for Productive Use

Can you share more information on the cooperation with 60 decibels? What data were you measuring? What were the results?

We partnered with 60 Decibels to conduct customer phone interviews. These interviews explore user characteristics, experience and satisfaction with products purchased through our RBF project, and quality of life changes. Here is a recent report we put out on the use and impacts of TVs - <https://efficiencyforaccess.org/publications/the-use-and-impacts-of-solar-tvs> . You can find more publications on the [EforA website](#)

Could you shed some light on the characteristics/skills of what you found to be a good M&E verification partner?

In CLASP's experience, an M&E partner that can be both a good thought partner and flexible with implementation timelines is key. For instance, sales might happen slower or faster than you expected. Can they adapt their process accordingly? If you get low verification results, what does that mean? What are consumers saying and how can the data be used to develop the ecosystem?

What are the main inquiries do you get from your customers?

Our customers are primarily manufacturers and distributors of off-grid technologies. They look to us for market intelligence, independent product testing, and financial incentives that can support the design and/or distribution of efficient appliances.

Does the CLASP programme include distributors? If so, is it still possible to join?

Global LEAP+RBF is designed as a support mechanism for both manufactures and

distributors. You can find out more information through our website - <https://globalleapawards.org/> or email info@globalleapawards.org

Which product for PUE was the most demanded by applicants in your RBF programme?

This has changed over time with the level of maturity of the technologies. I recommend reviewing this report - The State of the Off-Grid Appliance Market

What are the Specs & unit cost of solar pumps?

2019 Buyer's Guide for Solar Water Pumps provides information about solar water pumps that were named Winners and Finalists in the 2019 Global LEAP Awards. This catalogue includes rated product specifications, performance metrics based on laboratory testing, and sales contact information.

Mini-grids

Which counties were involved in the RFB Mini-Grid project? How were they selected for the project?

Turkana and Marsabit Counties. They were selected as they are the biggest counties in Kenya with the lowest electricity access levels.

What happens to the mini-grids not commissioned at the close of the project?

Alternative government and development partners' support is being sought for completion of these projects.

If all the RBF incentives went to the Minigrid Developers, how did you stimulate the uptake of power/electricity in those communities for the sustainability of the Mini-grids? Any plans to incentivise the end-users in the near future?

One of the main challenges mini-grid developers are facing in Africa is the lower uptake of power in rural areas, something which can be addressed by stimulating income-generating activities.

However, the realisation of these activities would require investment in income-generating appliances (IGAs) something which quite challenging for some local entrepreneurs (Productive Users). I would, therefore, suggest focusing on these end-users (PUE) in the near future if you want to accelerate the sustainability of the mini-grids.

Of the 10 sites built using the RBF facility: How is the condition of the oldest one? How sustainable is it from your point of view?

The mini-grid sites are very well executed in terms of components quality and workmanship. With the developers having to recoup 50% investment through the sale of electricity and legal obligation to provide reliable power for 20 years in these villages ensures quality.

Is there any productive use of energy? How is the tariff calculated considering the productive use of energy?

There are PUEs cases, enhanced existing ones as well as new ventures. Tariff calculation is regulated and there is a standard application tool issued by the regulator, EPRA.

What were the criteria for selecting stakeholders in your project and who were the main stakeholders? Did you provide any free interventions for the wellbeing of society?

Private project developers were selected based on their technical and financial capacity to implement mini-grids (engineer, finance, procure, construct, own and operate for at least 20 years). No free interventions were given to the communities beyond the universal benefits provided by the project (job creation, livelihood improvement, etc).

What are the risks of implementing off-grid solutions in areas where the transmission grid and distribution network is growing fast, for example, Hola and Bura in Tana River County?

For mini-grids, private developers get a permit to operate and provide electricity in the specific villages for 20 years. EPRA is developing mini-grid regulations to address situations where the grid is extended to villages with existing mini-grids.