

PILOT PLAYBOOK

DE-RISKING PAY-AS-YOU-GO
SOLAR HOME SYSTEMS
IN UGANDA REFUGEE SETTLEMENTS



SolarNow



Fenix International



BrightLife

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This Pilot Playbook was prepared by the Smart Communities Coalition (SCC), a public-private effort led by Mastercard and USAID. Made up of 60+ members, the SCC seeks to improve the delivery of essential services to forcibly displaced individuals and host community members through enhanced coordination between public and private entities and strategic implementation of technology in three areas: energy, digital tools and connectivity. For more information, please visit www.smartcommunitiescoalition.com.

01 INTRODUCTION & BACKGROUND

Introduction

The United States Agency for International Development (USAID)-funded project, “De-risking Pay-As-You-Go Solar Home Systems in Uganda Refugee Settlements” aimed to accelerate off-grid investment and energy access by incentivizing private-sector Pay-As-You-Go (PAYGO) solar home system (SHS) companies to enter Kiryandongo and Rwamwanja refugee settlements and host communities in Uganda. The innovative financing model of PAYGO promotes inclusion and facilitates adoption of digital tools by enabling customers to make mobile money-based payments that better match the realities of their financial circumstances.

Results

The objective of this project was to encourage private companies to view refugee communities as a viable market, with lessons and experiences gained through this project providing a catalyst for future energy access developments within refugee settlement economies. Initiated on October 15, 2018, the 22-month project was implemented by Green Powered Technology in partnership with Energy 4 Impact, and administered grants to three private sector PAYGO SHS companies.

Real-life stories

Smart Communities Coalition (SCC) Members:



USAID/Power Africa



BrightLife (by
FINCA International)



Energy4Impact



Engie Energy Access
(formerly Fenix
International)

Key lessons learned

Non-Members:



SolarNow



Green Powered
Technology

Hear from the
Pilot Partners

Resources

The pilot project disbursed \$465,000 in de-risking grants to three companies operating in Kiryandongo and Rwamwanja refugee settlements and host communities in Uganda, resulting in: 4,137 SHS units sold and 285 jobs created.



The objectives of this grants program were to further innovation and reduce the knowledge, product, financial, and risk barriers to serving forcibly displaced communities. Lessons and experience gained through this project will provide a catalyst for future energy access development for forcibly displaced individuals and local communities that host them.

02 RESULTS

OUTCOME 1: Facilitate market entry for PAYGO SHS companies in Kiryandongo and Rwamwanja.

Prior to the project, the SHS grantees sold PAYGO SHS systems exclusively to Ugandan nationals with formal identification. Although the grantees were interested in expanding sales to refugee settlements, a range of risks and challenges prevented them from doing so before inception of the pilot project. This Project helped de-risk the market for the grantees in terms of subsidizing the establishment of sales offices, travel and recruitment of staff, and gaining access to the settlements and partnerships. Through these activities, the companies were able to overcome the following perceived risks:

- Customer's inability to pay and low familiarity with credit
- Duration of displacement
- Reluctance to convert to solar energy
- Customers' existing access to solar
- Know-your-customer protocols and how to process required identity (ID) documents
- Variable mobile network coverage and mobile money exposure
- Type of permissions required to access refugee camps

OUTCOME 2: Increase socio-economic development in the settlements and host communities through private sector participation (PSP) and market development activities.

- Increased income: Access to SHS translated to lower energy expenses and those with businesses have an increased income due to the ability to stay open longer and attract customers with the lights. There is therefore more money in the customers' households, and through grantee employment of local staff, there is also additional income.

¹ These jobs are divided between salaried and commission-based staff. Nearer the end of the project but before the COVID-19 lockdown, many jobs became inactive. BrightLife had 35 active sales agents and Fenix had 18 active agents.

- Quality of light: 74 percent of SHS customers reported that the bright lights allowed more children to study and read at night, and 61 percent of respondents reported that they extended productive hours to cook, clean, and wash after dark. Customers also appreciate the additional sense of security provided by lights at night.
- Product reliability: Reliable mobile phone charging at home was valued by all customers. Respondents with television or radio sets appreciated having access to entertainment and news.

OUTCOME 3: Support development of the local refugee and host community economy through inclusion of entrepreneurs in refugee settlements.

- There is emerging evidence that access to PAYGO SHS results in greater income for established businesses and new small-income generation for other customers.

“All three companies are planning to continue sales (BrightLife will scale back to cash-only sales), and all three companies are planning to continue after sales service.”

BrightLife succeeded in establishing and branding a storefront in Kiryandongo. The company trained over 200 sales agents, 130 of which made at least one sale. Despite high attrition rates, the company signed contracts with 70 agents. The company was likely on pace to meet its sales target of 1,725 SHS, but due to the nationwide shutdown due to COVID-19, sales virtually stopped, limiting the company to a total of 1,095 units sold. By June 2020, repayment rates for refugees were nearly double that of customers in the host community, with refugees achieving a 51 percent repayment rate and host community customers achieving 30 percent – partly due to refugees using their regular handout payments for solar credit repayment. In total, 190 units were repossessed, which complied with the project target ceiling of 260 units.

SolarNow sold 112 systems towards its target of 250, including 19 kW in installed capacity towards its target of 25kW. The company hired 16 sales agents and staff, which is double its original target. SolarNow also successfully teamed up with AVSI Foundation, an organization supporting refugees with education and health, to gain insight into community socio-economic dynamics and help build customer trust. Out of all grantees, SolarNow had the highest percentage of sales to refugees at 45 percent. The company’s SHS units were relatively larger than that of other companies’, nearly a third of which were applied to productive uses for business and commercial applications (i.e. barber shops, small-scale cinemas, bars, cold-drink refrigeration, and irrigation).

Fenix International opened two points of sale, one in the host community of Rwamwanja and the other in the host community of Kiryandongo. Fenix International hired five full-time employees and 47 sales agents. However, due to the high attrition rates in the area, the number of sales agents declined to 18 by the end of the grant period. Fenix International sold 2,930 SHS products towards its goal of 5,000. Sales were closely split between Rwamwanja and Kiryandongo, reaching 1,606 and 1,324, respectively. SHS products sold by the company were smaller in size and thus the reason for larger number of sales.

03 REAL-LIFE STORIES FROM THE FIELD

Introduction

Results



Patrick Ojok was the first **BrightLife** customer in Kiryandongo, where he lives with his wife and seven children. Now with an SHS, his family feels more secure during the night since they have a security light, and lights both inside and outside the house. Ojok's wife charges her phone on a daily basis to communicate with Ojok when he is away, and the radio entertains the children.

Photo credits: BrightLife

Real-life stories

Key lessons learned

Mwesigye Simon is a **Fenix International** customer based in Rwamwanja's trading centre. He uses a Fenix television set to attract customers to his shop and entertain his family. Mwesigye occasionally does phone charging business as well.

Simon is very consistent with his Fenix power kit payment and he is working hard to complete his kit payment so that he would be able to buy another TV for his mother.

Photo credits: Fenix International



In the Kiryandongo refugee settlement, **Omar Ismael** bought a **SolarNow** 500Wp system, allowing him to provide a phone charging service to dozens of phone users. He reduced his energy expenditures by nearly 70% by switching from a diesel genset to solar power.

Photo credits: SolarNow

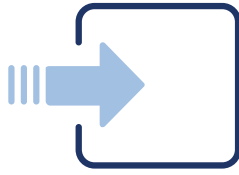


Hear from the Pilot Partners

Resources

04 KEY LESSONS LEARNED

Ease of access



ENTRY TO SETTLEMENTS

Experience: Initial written permission from the Office of the Prime Minister was required but entry after that was unhampered

Key lesson: Ensure permission is secured early to avoid delays



ESTABLISHING POINTS OF SALE

Experience: Suitable infrastructure and services were available in host communities but lacking in refugee settlements

Key lesson: Recommend satellite presence in settlements for customer accessibility



TELECOMS NETWORK

Experience: General network coverage is good, but significant gaps remain

Key lesson: Network gaps impact repayment (most common customer complaint) and after-sales services



ACCESS TO MOBILE MONEY AND MOBILE PHONES

Experience: Most households have a mobile phone and are familiar with mobile money

Key lesson: Not possible to on-board those without mobile phones. Potential customers are quick to convert to using mobile money



PARTNERSHIPS

Experience: Forging local partnerships can compensate for lack of local knowledge

Key lesson: Partner options available but forging relationships requires time. Start process early.



RECRUITING/RETAINING STAFF

Experience: Refugee settlements were challenging; host communities presented standard conditions

Key lesson: Companies must foster adjustments to commission-based pay models

Market profile



THE PRESENCE OF A COMMERCIAL MARKET

Experience: Potential for a sustainable market in both communities

Key lesson: Refugees rely on humanitarian stipends and lack experience with long-term credit

HOST COMMUNITIES VS. REFUGEE MARKETS

Key lesson: Refugee markets slightly inexperienced with long-term credit purchases

Experience: High level of integration between the markets, both offer commercial potential



DISTINCT CUSTOMER PROFILES

Experience: Smaller PAYGO systems appeal to a mixed market; larger systems to more defined market

Key lesson: Larger, more tailored systems appeal to a more defined income segment

CREDIT CHECKS AND KNOW-YOUR-CUSTOMER PHILOSOPHY

Key lesson: Grantees modified customer databases to accommodate refugee IDs

Experience: Refugees, lack of national ID documents stymied standard credit check process



CREDIT PERFORMANCE AND REPAYMENT LEVELS

Experience: Two companies repayment rates were consistent with general portfolio²

Key lesson: Repayment was impacted by poor payment infrastructure (e.g. mobile money, telecoms)

Key lesson: Smaller systems enhance communications for agricultural information (e.g. via phones, radios)

PRODUCTIVE USE OF ENERGY

Experience: Larger systems linked to productive activities (e.g. refrigeration, barbers, cinemas)



MARKETING STRATEGIES

Experience: All grantees made only slight adjustments to marketing strategies in refugee markets

Key lesson: Greater reliance on radio, customer ambassadors, and constant education

ADJUSTING BUSINESS STRATEGIES

Key lesson: A level of agility is expected from PAYGO companies entering new markets

Experience: Minor adjustments around marketing mediums, incentive structures, local partnerships



² Two grantees, Fenix and SolarNow, have witnessed acceptable repayment rates where as BrightLife experienced credit repayment levels in Kiryandongo as “the worst in the organization,” which deteriorated from 60% levels of repayment before the COVID-19-induced lockdown to 39% three months later. While clearly COVID-19 and the government’s response impacted the customers’ ability to pay, BrightLife cited other non-COVID-19-related explanations, such as the seasonal nature of income derived from agriculture and non-financial factors that impeded consistent payment, such as frequent device damage by rodents chewing through the wires, customers not always able to find mobile money agents (low penetration), and poor mobile phone network coverage impeding receiving credit codes.

05 HEAR FROM THE PILOT PARTNERS

What was your highlight during the pilot, anywhere from inception to now?

BrightLife: We noticed a significant difference between the repayment behavior of refugees and host community members, suggesting that refugees are entirely dependent on solar and apply regular handout payments for solar credit repayment.

Fenix International: This project improved our contextual understanding to tailor service delivery to refugees and their host communities.

SolarNow: The pilot allowed us to extend the same credit terms that we offer locals to refugees.

What is one recommendation you would give for scaling up this pilot?

BrightLife: There needs to be a deliberate effort to educate stakeholders in the area about prepaid solar to improve uptake and repayment behavior.

Fenix International: Recruiting and retaining a good sales team is crucial. Plan to have a diverse team that can speak the common languages found within the settlement.

SolarNow: Stratification of the focal market in regard to product range. With credit financing, SolarNow can best service businesses and institutions.

Now that the pilot has concluded, what part of the pilot will continue? (i.e will trained agents still sell products? How will beneficiaries address a product malfunction? What is the sustainability plan?)

BrightLife: The main part of the business that is continuing is after-sales services that include collections and helping customers in case they experience issues with their devices. Until we are able to get better repayment from the devices that were sold in the host community area, BrightLife will engage in cash-only sales.

Fenix International: We will keep selling SHS from the points of sale set up for this project and will continue to employ sales agents. As with all our products, customers will also continue to have access to all after-sales services should they experience any malfunctions of their SHS.

SolarNow: The recruited sales officers automatically joined our general staff portfolio and proceeded as per their job descriptions. They are key to client relationship management in regard to credit collections, service, and referral handling. This therefore ensures that customers' needs and queries are promptly attended to.



What advice would you give to our SCC members implementing projects in refugee settlements and host communities?

BrightLife: Work very closely with the already existing partners in the settlement to be able to penetrate the market there.

Fenix International: Factor in extra time to accommodate unexpected challenges and delays.

SolarNow: In regard to our product range, we realized that we are more impactful in providing institutional and business energy solutions. Nonetheless, a great many of the customers enlisted under the project signed up for SHS to solve lighting and entertainment energy needs. However, the former exhibit a healthier credit status than the latter.

Green Powered Technology: Success requires adaptability: Focus on market strategies, determine which strategies are achieving success, and continuously adjust accordingly. This also involves language since refugees do not always speak the host language(s) fluently.

06 RESOURCES

1. [August 3, 2020 Webinar slides and Q&A responses](#)
2. [Infographic of Best Practices](#) from the three Pay-As-You-Go SHS providers in Uganda
3. [Final full report](#) on the Uganda De-Risking Pay-As-You-Go SHS project

