Beyond the Last Mile: Developing the Solar Energy Market with Refugee and Host Communities

October 2022

Access to energy is a critical factor for economic development. Only 10% of households in Ethiopia's Somali region are connected to the national electricity grid, which is unreliable with frequent power outages. Meeting basic household energy needs, such as lighting, powering basic appliances or even charging mobile phones remains a challenge for many.

Home solar energy systems represent a viable and scalable solution to address this. In the Somali region, however, the market for solar energy products is underdeveloped with only a limited number of solar energy products available. Those that are available tend to be from neighbouring Somalia, are cheap and poor quality and frequently break after a few months.

The Somali region hosts more than 200,000 Somalian refugees which are housed in eight refugee camps - three in the Jijiga region and five in the Dollo Ado region. They have all been refugees for more than 10 years, with some individuals having been displaced for more than 30 years. One of the eight camps has access to grid electricity but the rest rely on low-quality solar products and other expensive energy solutions such as batteries, torches, candles and diesel generators.

Key Challenges

Access to high quality, durable solar energy products

High-quality, durable solar energy products are not available on the local market. Demand for solar kits is high but most products on the market are sourced through informal, cross-border trade. These imported products are relatively cheap, but the quality is low and they often break within a few months.

No after-sales service or guarantee

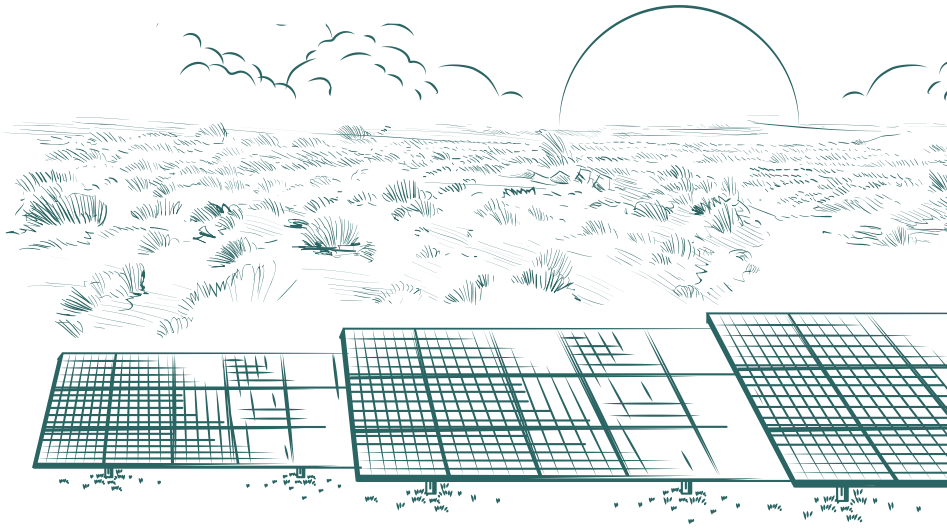
The solar kits available for remote host and refugee populations have no after-sales service or guarantee. When there is a technical problem people do not know how to solve it and end up having to buy another kit.

Limited access to affordable and flexible financing options

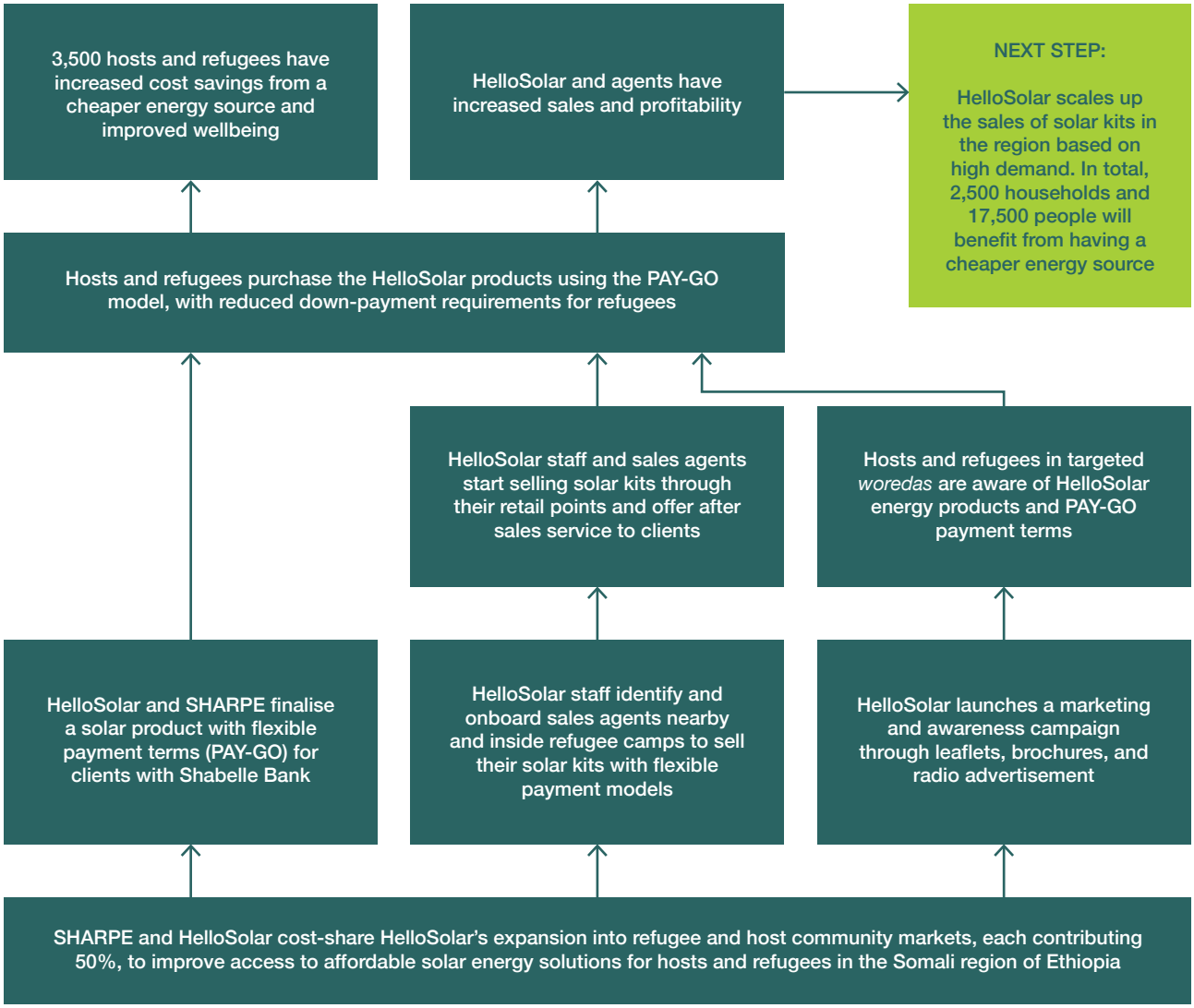
High-quality solar kits are more expensive than cheap imports, but the lack of accessible consumer financing models makes these high quality solar products unaffordable for many.

Recognising the potential for solar energy

Solar energy has high potential in the Somali region, with a climate favourable to solar-powered products. For those living off-grid, solar provides a climate-friendly and affordable solution. Solar can power household lighting, allowing children to study in the evening. It reduces dependency on more expensive, less efficient, riskier and dirtier energy solutions such as batteries, torches, candles and diesel generators. Increased lighting can also increase safety, particularly for women and girls. Standalone solar systems provide reliable and cost-effective electricity for off-grid communities, including host and refugee communities.



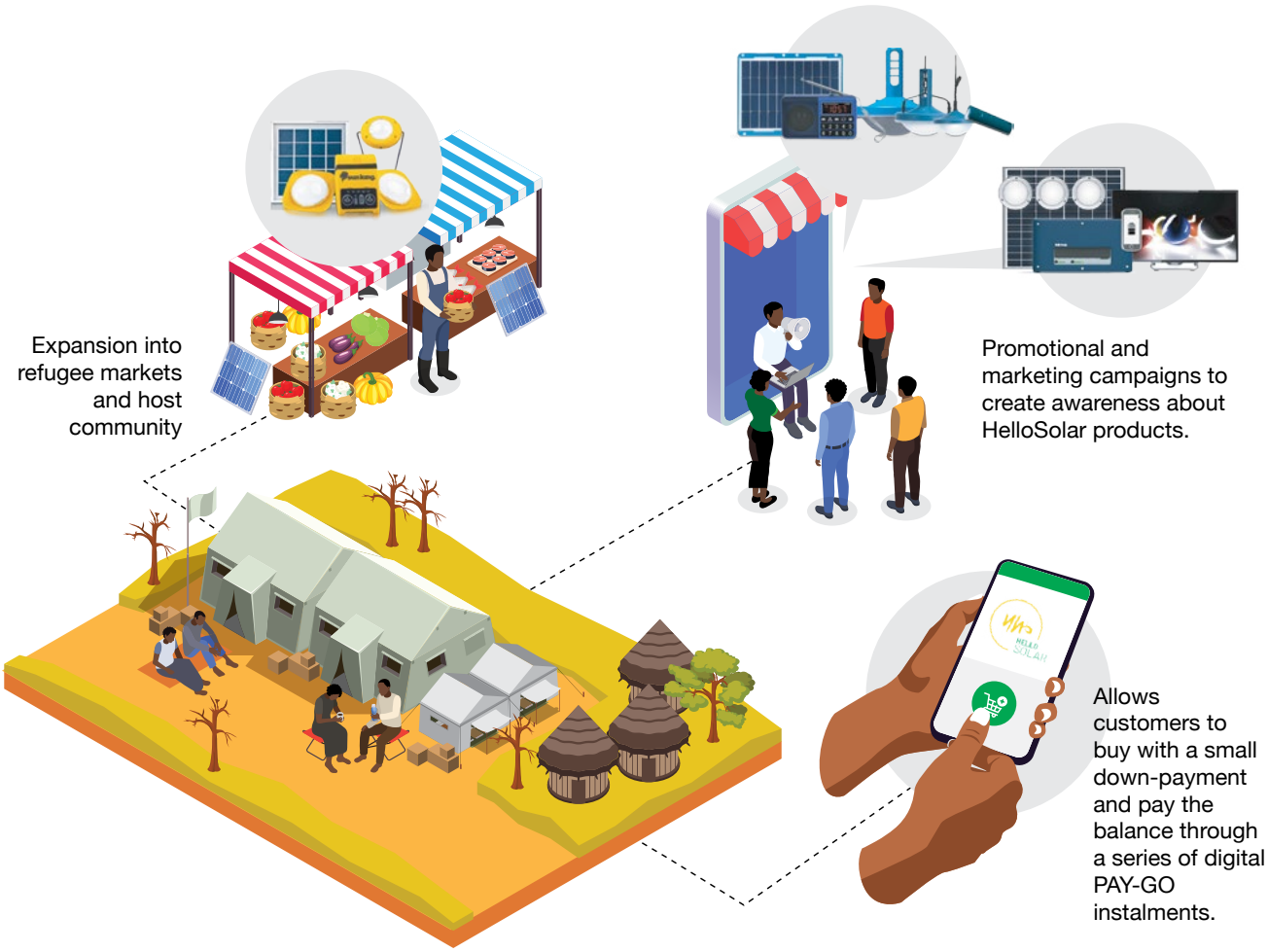
SHARPE's partnership with HelloSolar for viable energy solutions for hosts and refugees



HelloSolar is a decentralised, off-grid solar energy solutions provider. It is committed to improving the quality of life in rural communities in Ethiopia through access to sustainable energy and connectivity through affordable solar systems. To break the reliance among remote host and refugee communities on cheap, poor-quality solar solutions, SHARPE agreed to co-fund HelloSolar's expansion into refugee markets, part-funding the purchase of 2,500 home solar energy kits and building sales and distribution networks.

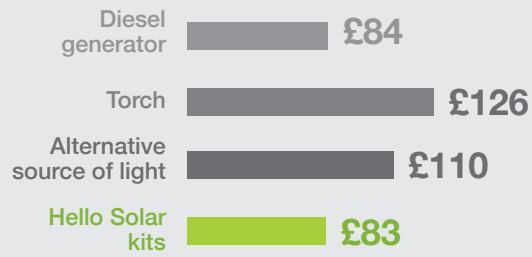
With SHARPE's support, HelloSolar expanded its distribution and sales agent networks to cover host communities and refugee camps. It also conducted promotional and marketing campaigns to create awareness about HelloSolar products, including after-sales support service and two-year guarantees. Uniquely in the solar energy market, HelloSolar allows customers to buy their products with a small down-payment and pay the balance through a series of digital PAY-GO instalments. This flexible payment modality is accessible to low-income households, including refugees, despite it being more expensive than other available options.

Business model



Energy options cost comparison

(8 hours per day in a year)



Cost saving from using HelloSolar kits **£26**

Scale-Up

During the market testing phase all **500 HelloSolar kits** were sold, demonstrating the viability of the market. With an average household size of seven people in the Somali region, **3,500 people** can now enjoy safe lighting and a reliable power source. HelloSolar is now scaling-up - an additional **2,000 home solar kits** are being sold, with reports of strong demand and long waiting lists for the kits. This is expected to create access to electricity and lighting for an additional **14,000 people**.

Sahara Omar is a refugee living in Ethiopia's Somali region. Born in the camp 30 years ago, Sahara now has three children, all of whom were also born in the camp.

One of the biggest struggles Sahara faces is accessing reliable electricity. While she is connected to the national grid, it is unreliable and is often down for several days at a time, during which she relies on torches with dry cell batteries for lighting. This, however, is expensive – one battery lasts only one night and costs 30 birr (£0.50) to buy.

Sahara heard about HelloSolar when visiting the nearby market and seeing the kit. After being told she could buy the kit with her refugee ID card and pay for it through a series of monthly instalments, she decided to buy it. The kit comes with three bulbs, a torch and a phone charging port that Sahara uses all the time. Sahara has almost fully paid off the kit through the PAY-GO model.

> *I really like the kit because it's good quality and comes with a two-year guarantee and helpline. It helps me cook and helps my children study at night. I am a single mother and the lighting makes it easier for me to look after my children at night.*
>
> **Sahara Omar.**

Lessons learnt

- Other energy and lighting sources such as torches, candles, diesel generators or the low price-low quality imported solar kits are more costly in the long-term than HelloSolar products.
- The HelloSolar product is preferred over cheaper alternatives because of the quality, the after-sales support package and the two-year guarantee.
- Accessing the refugee market requires a change in payment modality, with a reduced upfront payment and a longer PAY-GO repayment period.
- PAY-GO is a highly appropriate financial innovation in host and refugee markets, making quality products affordable for low-income consumers.
- There is strong demand among low-income consumers, including refugees, for good quality, reliable products despite the higher price.
- The refugee and host community market can be profitable with a combination of the right sales plus service package.

The Strengthening Host and Refugees Populations in Ethiopia programme (**SHARPE**) works to strengthen the economies of host and refugee communities in three refugee hosting regions in Ethiopia: Dollo Ado, Gambella, and Jijiga, using an adapted market systems development approach. SHARPE is implemented by DAI with technical support from Opportunities Unlimited.