



# AFRICAN CLEAN ENERGY

PROSPERS PRESENTATION

07 July 2021





# **PROSPERS**

**Promoting Solar Powered Energy Efficient  
Stoves in Kyangwali Refugee Settlement**

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# African Clean Energy

## Who are we?

ACE Energy Solutions Uganda is a subsidiary of African Clean Energy (ACE). We aim to make clean energy and connectivity accessible to all.

We manufacture and distribute our clean energy system, the ACE One to off-grid, rural households in the regions in which we operate across the globe.

## Where do we work?

ACE is headquartered in Amsterdam, the Netherlands. We are operating in Uganda, Lesotho, Cambodia and Kenya.

In Uganda, we have offices in Mbale, Gulu and, soon, Fort Portal.



The ACE Team in Gulu, Uganda

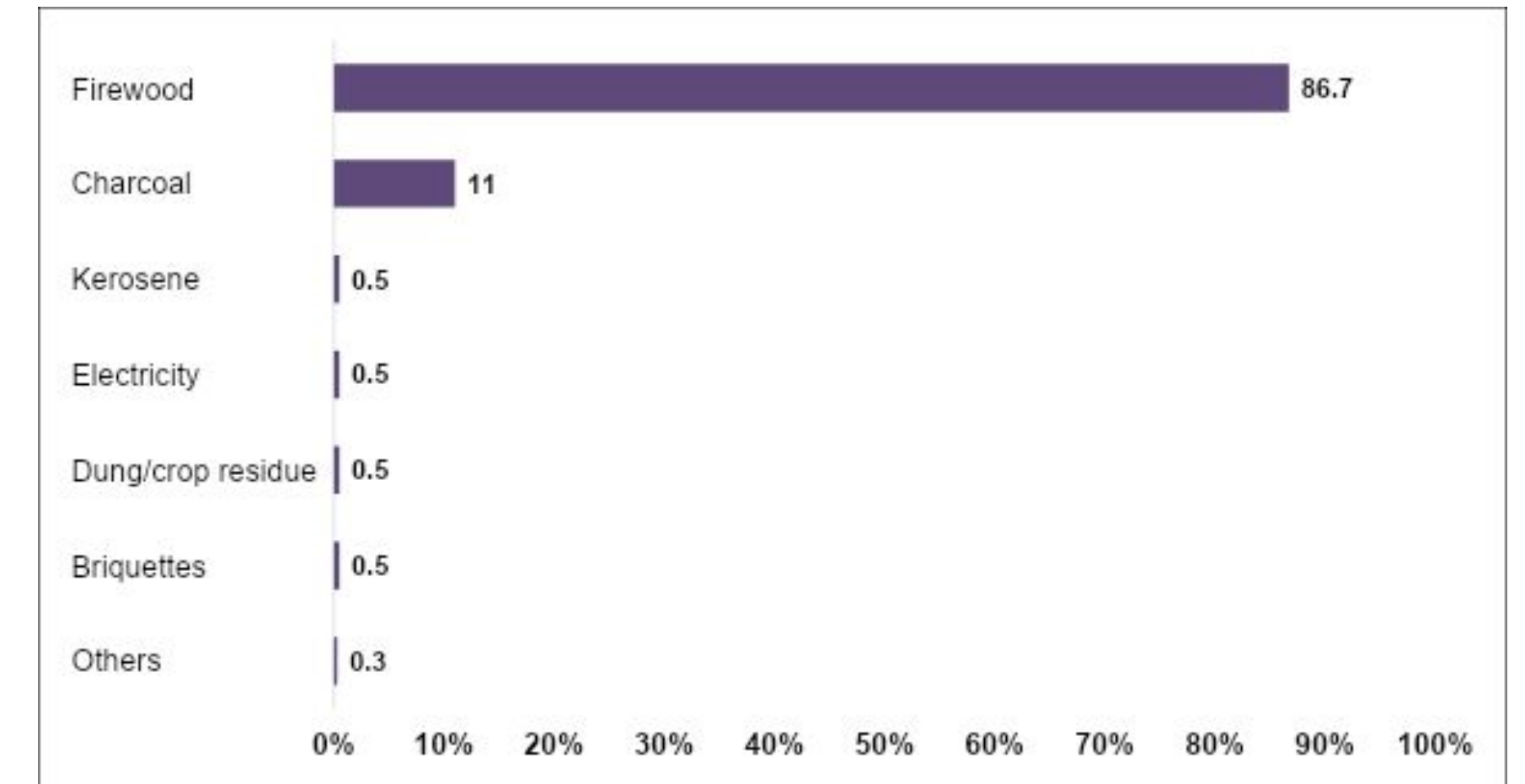


# The Challenge

## Access to clean energy in Kyangwali, Uganda

Our project partner, CARE carried out a baseline energy survey in the Kyangwali Refugee Settlement in southwestern Uganda in 2020. According to the survey:

- Only 12% refugee households use energy efficient stoves. Portable stoves are the most popular (53%), followed by three stone fires (39%).
- Firewood is the energy source of 86.7% of the population. Most households (76.1% of refugees) collect firewood from the nearby Bugoma forest, an important local ecological resource undergoing rapid deforestation.
- Firewood consumption is putting pressure on local natural resources, resulting in conflict between refugee and host communities. In response, the government has limited access to the forest to Wednesdays to collect wood.
- With restricted access to the forest, refugees often find themselves without fuel for cooking. According to a SE4All study, half the households in settlements have reported undercooking meals more than twice a week due to limited access to fuel, compromising their nutrition.



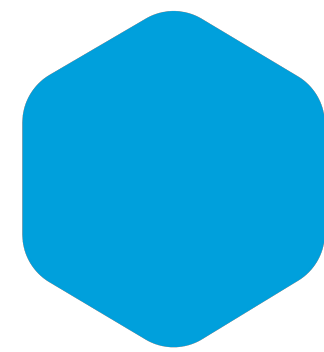
Women collecting firewood in Kyangwali, Uganda. Source: CARE Uganda



# PROSPERS

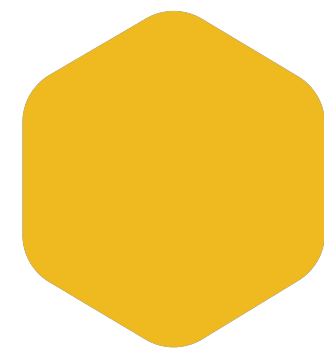
## Addressing the challenge

Improving accessibility for refugees, particularly women, to high quality & affordable clean energy solutions in the Kyangwali refugee settlement:



### Clean energy technology

African Clean Energy will make our clean energy system, the ACE One, accessible to refugee & host communities on a flexible repayment model.



### Clean fuel

Kabarole Research Centre will set up a local briquetting business programme to promote local entrepreneurship & improve access to clean, biomass briquettes.



### Gender equality

CARE Uganda will implement their gender-based approach to ensure the project is sensitive to gender issues.





# PROSPERS Partnership



Different biomass briquettes

Integrating their gender approach & carrying out project monitoring & evaluation



The ACE One Clean Energy System

Establishing the Briquetting Business Programme



Selling the ACE One on the User Recommendation Bonus (URB) model

# The ACE One

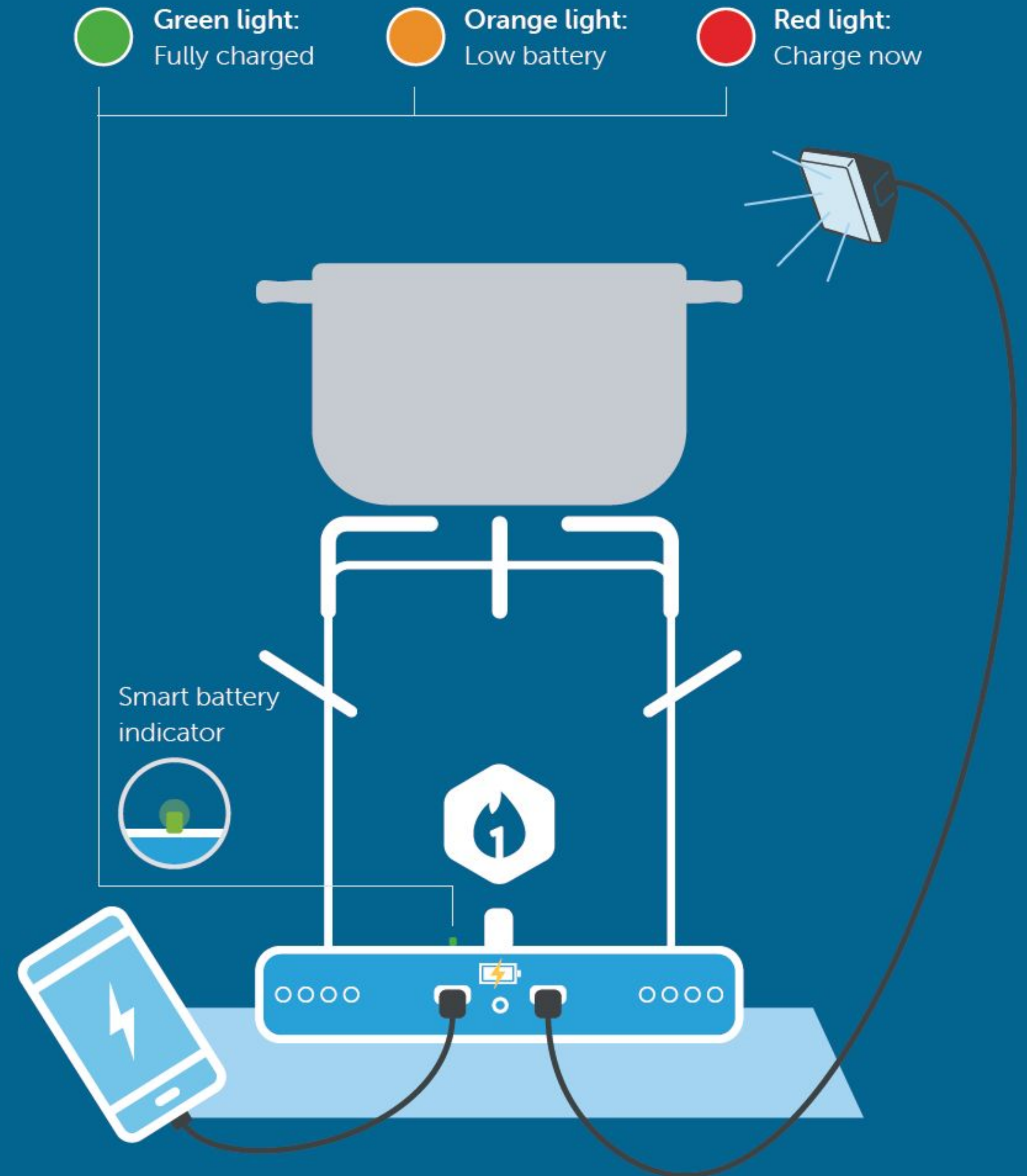
## What makes it innovative?

The ACE One is an advanced solar-biomass hybrid clean energy system & cookstove.

The ACE One is a highly efficient cookstove, reducing fuel need by 52%. It emits very little smoke when cooking, protecting the end-user from harmful HAP.

The ACE One is fuel-flexible, so it burns any solid, dry biomass fuel.

The ACE One is distributed with a solar panel which generates electricity so users can plug in the LED lamp or their phones to charge.





# ACE Connect



## What is ACE Connect?

The ACE One is now sold as part of the ACE Connect bundle which includes an Android smartphone.

The phone comes with a pre-installed ACE Connect app. The app enables customers to manage their loan repayments, and contact customer services directly.

Giving refugee populations access to a smartphone unlocks a multitude of opportunities and services in refugee settlements.

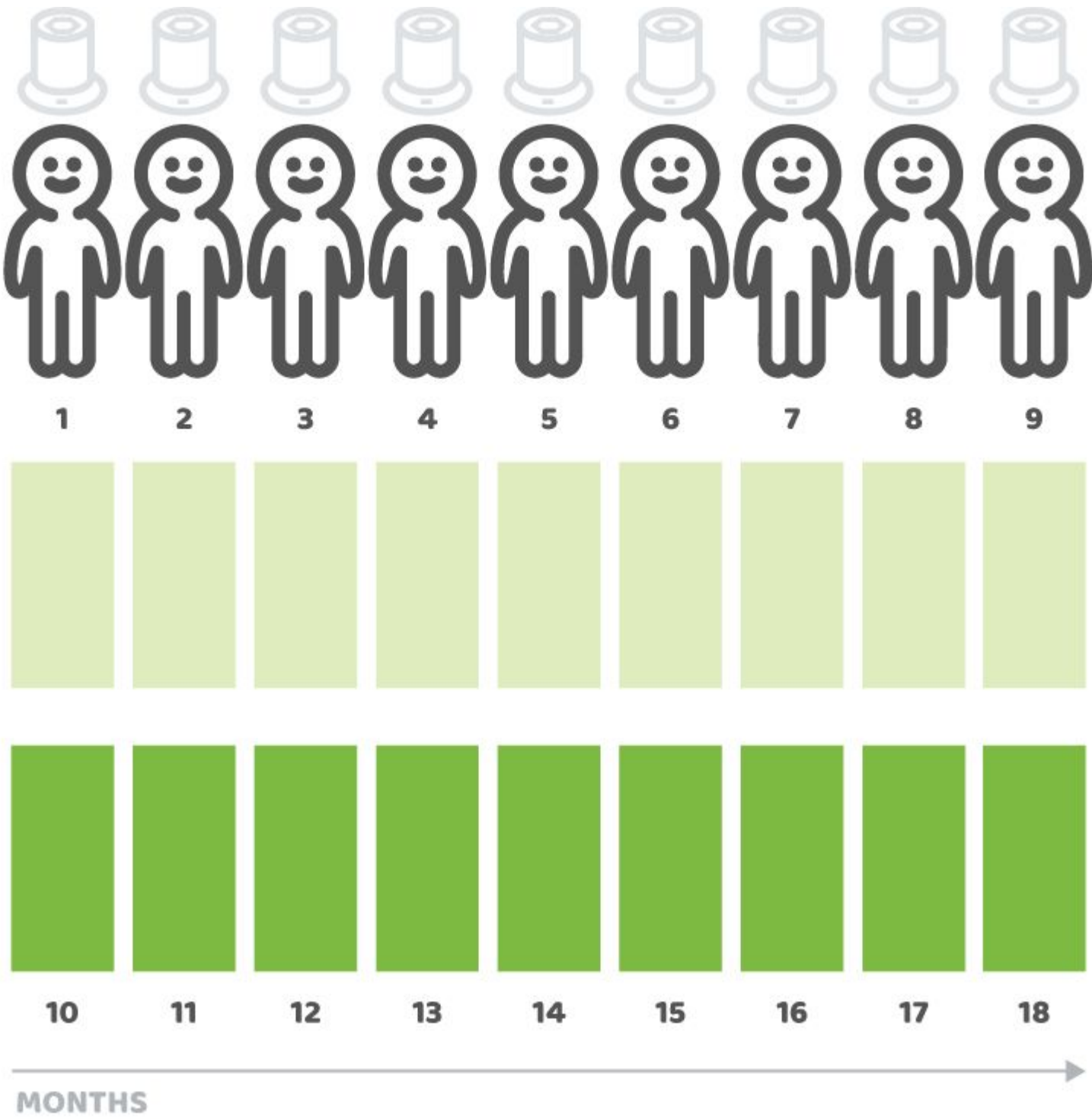
The app allows ACE to gather valuable ACE One usage data. This helps us understand how our product is used, and how we can improve it.

Under the PROSPERS project, ACE Connect will enable us to gain insight into the energy habits of under-researched refugee populations.



# User Recommendation Bonus (URB) Model

Each time a refugee or host community customer successfully recommends the ACE One to a friend, they reduce the cost of their ACE One by one month, or 35,000 UGX



The ACE One is sold with an Android smartphone on an 18 month microloan (670,000 UGX)

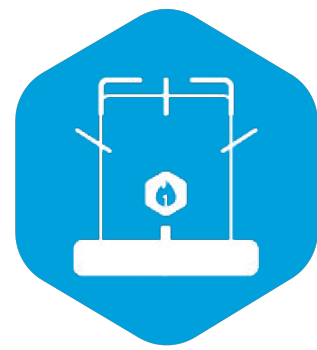


The customer can reduce their loan by half upon successfully referral of 9 new customers



# PROSPERS Outcomes

What are the intended outcomes of the project?



700 households with at least a 50% reduction in fuel consumption



10 new sustainable biomass briquette businesses, generating at least 360,000 UGX per month



Mainstreaming gender issues in the refugee-energy context





# ACE's Humanitarian Strategy

We are testing the URB model in the Kyangwali refugee settlement under PROSPERS:

1. The model will enable us to subsidise the ACE One for refugee households who have less available income without disrupting the local cookstove market.
2. If successful, the URB model is likely to significantly reduce ACE's customer acquisition costs, enhancing our capacity to expand our operations in high risk humanitarian settings in Uganda and beyond.
3. The model will benefit from the networks which exist amongst neighbours in refugee settlements. So it makes social and commercial sense for ACE to bring on refugees seeking employment as sales representatives going forward.
4. The model will leave consumers with additional income each month to spend on fuel, enabling us to test the market for sustainable biomass alternative fuels





# Contact Information



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