EELA Stakeholder Forum 29-31 March 2023, Nairobi, Kenya.

Session: Showcasing Selected Projects of the First Call for Proposals of the EELA Technical Assistance and Co-financing Facility.

Chipiliro Baluwa - Head of HR, Zuwa Energy.


Efficient and innovative solar refrigerators in off-grid Malawi using payroll system .

ABOUT ZUWA

Zuwa is a Malawian solar asset financing company. We sell solar home systems using our modern pay as you go technology - allowing customers to own a solar system and pay for it later and in instalments.

OBJECTIVE OF PRESENTATION

Showcase our PAYGO and CaaS Solar fridges for off-grid civil servants in Malawi.

The Challenge

Refrigeration is a luxury and expensive in Malawi and Africa. Not being able to keep food longer, means that households must spend money on a daily basis buying fresh foods like vegetables, milk.

Two challenges

1. Financial constraints

2. After sales constraints

Zuwa applied for funding to solve these challenges under the EELA window in 2021 and was successful. Implementation to start Q2-2023

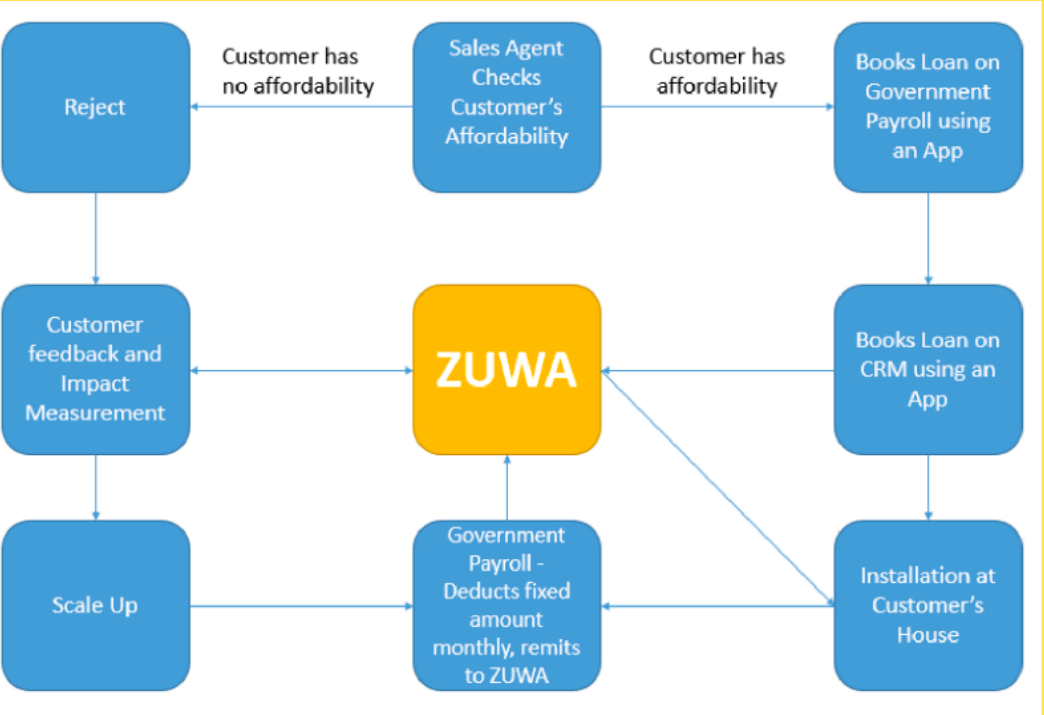
The Solution

Promotion of energy efficient solar refrigeration to off-grid based civil servants in Malawi using pay as you go and cooling as a service models.

Both PAYG and CaaS models will allow target customers to buy solar fridges incrementally for a given period of time.

EELA Funding:	Euro 144,000
Matching funding:	Euro 113,000 (supplier credit)
Project period:	12 months

Why offer public servants?



REDUCE CREDIT RISK. (Pilot)

Working relationship with the Malawi Government for payroll deduction.

Through this arrangement, Zuwa will install solar fridges to rural civil and public servants and the Ministry of Finance will deduct monthly payments according to customer contract direct from the payroll using a payments management system.

PAYGO: ~$25 per month

CaaS: ~$15 per month

The

SureChill.

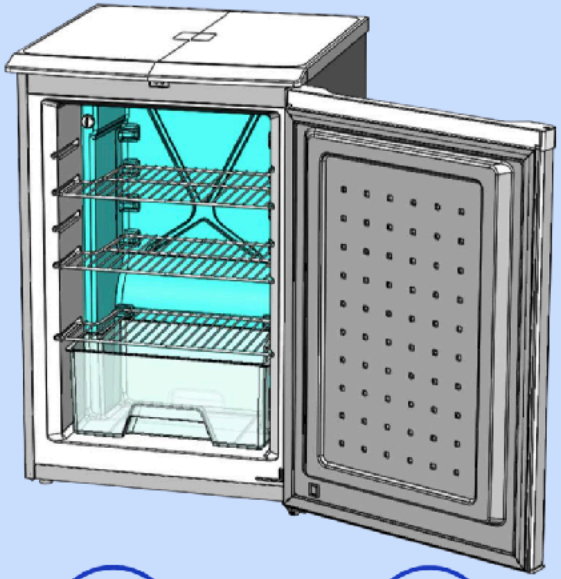
A revolutionary cooling technology company

It looks like a normal fridge

But it is very different inside

Manufactured in partnership with | Midea

- An internal water jacket in the fridge is filled with water
- Energy from solar panels or mini-grids is used to start the compressor which cools the water in the water jacket
- The fridge makes a small block of ice in the water jacket that sits in the water
- The properties of water and ice mean that the unfrozen water in the jacket is at a **constant temperature of 4°C**
- As this cold water surrounds the internal storage compartment it then cools the fridge
- The fridge can stay cold for long periods of time and only needs to take power when it needs to replenish the ice



Batteries not required

Cool, even without power

USPs with HSB fridge

The value to the user

Only requires power for a few hours a day

Solar-powered no ongoing costly energy bills

Clean & sustainable energy

Repairs are covered under our 2-year warranty

No costly batteries or replacements are required

PAYGo enabled offering payment affordable plans

Less environmental impact

Holdover ensuring cold drinks available 24h a day

Technology that is robust & reliable

Impact of the project

400 households

10 full time Jobs created

50 agent jobs created

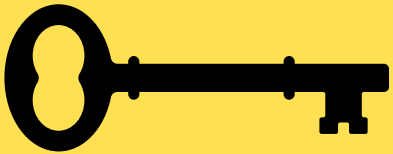
Savings*

~ $250/annum

Avoided emissions**

~ 140kg CO_2: if battery powered

~ 332kg CO_2: if grid powered



Zuwa and SureChill work together to unlock Capital to replicate this at SCALE.

*based on Kenya pilot by SureChill

**based on Energy Saving Trust tests

Opportunitie

S No taxes on solar panels.

- Skilled refrigeration technicians.
- Income generation in productive use application - selling cold drinks.
- Demand from grid connected customers due to unreliable grid challenges.
- Growth in eco-tourism sector could lead to increase in use such fridges.

Barriers

- Higher taxes on the fridge itself.
- High costs of distribution due to bulky size of fridge.
- Inflationary pressure causing the price to go up.
- Low knowledge of solar (awareness)
- Theft of solar panels on customers' roof.

THANK YOU

Unlocking opportunities
where they never existed.
#Tilikonko