

*Webinar Series: Accelerating Global eCooking*

# Collaboration with the Private Sector: Developing Value Chains for eCooking

15 February 2024



in partnership with



# Welcome remarks

Alexander Haack

Programme Director

EnDev/GIZ



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# Agenda

- *11:00-11:05 Welcoming remarks*
- *11:05-11:10 Introducing the webinar and the speakers*
- *11:10-11:50 Presentation of business models, success factors and challenges*
- *11:50- 12:20 Sounding board panel discussion*
- *12:20- 12:40 Discussion session with audience*
- *12:40-12:45 Concluding remarks*

# Introducing our presenters



Edwin Kwesiga  
Managing Director  
EnerGrow



Victoria Butegwa  
Component Manager  
EnDev Uganda



Samwel Naimasia Tobiko  
Component Lead  
EnDev Kenya



Meredith Muthoni  
Head of Electric Finance  
BURN Manufacturing



Dr. Rocío Pérez Ochoa  
Co-founder  
Bidhaa Sasa

# Uganda

# EnDev Uganda: at a glance

## Country Context

**Electrification rate:** (57%; 38% off-grid, 19% on-grid)

**Access to clean cooking:** 18%

## Characteristics of the eCooking sector

**Supply:** Few suppliers/distributors, most products are imported, not fit for local foods (UI)

**Demand:** Limited awareness, perceptions that e-cooking is expensive

**Enabling Environment:** High government priority, e-cooking strategy development, lack of tax incentives,

## Geographic scope of EnDev's intervention

**EPC supply chain support:** Country wide

**E-cooking Baseline Study:** Regional (Northern, Eastern, Central, Western)



# EnDev Uganda: at a glance

**Type of interventions** **EPC supply chain support:** Support SMEs to establish and strengthen EPC distribution network

**E-cooking Baseline Study:** Assess usage and consumption, and perception aspects in 80 HHs

**Enabling Environment:** Support MDAs, associations to enhance e-cooking policy framework

**Number of partner companies** 3 SMEs (EnerGrow, UpEnergy, Biogas Solutions Uganda Ltd.)

**Strategic partners** MECS Programme, Ministry of Energy and Mineral Development, Sector Associations, etc.

**Target achievement** 1155 EPCs

**Targets (end-2023)** 400 EPCs





# EnerGrow



# EnerGrow

- EnerGrow makes electrification bankable.
- EnerGrow makes access to electric cooking affordable and achievable.
- And we enable household savings and clean cooking in doing so.



EnerGrow

# The solution: business case and model



1. EnerGrow partners with power utilities whose electricity often goes unused.

2. We identify business & community productivity needs, provides asset financing & financial literacy training

3. Our customers, our energy utility partners and EnerGrow all grow revenues.



**REPEAT!!!**

**1 Urban Loans**

**Type:** SME & household lending- direct & Buy-Now-Pay-Later partnerships.

**Customer:** Urban SMEs and households.

**Product:** Productive tools & appliances, e-cooking, EVs, Agri. Loans of \$300-2,000.

**Current Gross Lending Margin:** 43%

**2 Rural Loans**

**Type:** SME & household lending - direct (agents) & minigrad partnerships.

**Customer:** Rural SMEs and Households.

**Product:** Productive tools & appliances, e-cooking, EVs, Agri. Loans of \$300-2,000.

**Current Gross Lending Margin:** 40%

**3 Carbon Revenue**

**Customer:** the 95% of Uganda's 7.5m HHs currently cooking on dirty fuels.

**Product:** First product is pressure cookers with measured carbon offset,\* EVs coming online 2024.

**Pre-pilot traction:** \$10,000 of potential credits already generated.

# What potential and challenges do you see in the sector?

## Potential/Opportunities

- Support from Ministry of Energy and other Government related bodies
- Asset financing options that provide affordability and address price barriers.
- More Private sector players entering the market and investing in awareness will most likely drive uptake of eCooking appliances.

## Challenges

- Perception that cooking with electricity is expensive
- Safety misconceptions around using an Electric Pressure Cooker
- Limited awareness around the availability and cost efficiency of eCooking appliances

# Success factors that have enabled us to grow

EnerGrow does productive asset-financing right.

## Key Success factors

Strong partnerships with Energy partners both On and Off grid

Robust Credit management process developed from initial learnings

Management team

Financial Literacy training



## Partnerships

Current Average\*\* Loan: \$330



# If you would have three wishes...

- More early-stage funding investment to support access to debt and Results Based Financing as well as support in accessing carbon financing.
- More intentional collaboration amongst all Private and Public sector players around the awareness and messaging for eCooking
- More private sector players to enter the market in Uganda and so that there is a snowball effect of uptake due to improved product awareness and more pricing and asset financing options for the end user.

# Kenya

# EnDev Kenya

## At a glance

### Country Context

Electrification rate: 75% (Urban 97% and Rural 65%)  
Access to clean cooking: 30%  
(Urban 54% and Rural 30%)

### Characteristics of the eCooking sector

- **1% of HH** use electric cooking
- Electricity **tariffs** are high
- **Credit** mechanism e.g. PAYGO accelerating adoption

### Geographic scope of EnDev's intervention

- All regions in **Kenya**

### Type of interventions

- **RBF** for HHs, MSMEs & SIs
- Demand side RBF
- Experimental Tariff for eCooking
- Last Mile Awareness creation

### Number of partner companies

- **8** Manufacturers & Distributors
- **2** Technologies (EPCs & EICs)

### Strategic partners

MoEP, MECS, KPLC, CCAK, CLASP

### Target achievement

928

### Targets (end-2023)

2,000





# BURN

# BURN: world's largest modern cookstove company

- 4.4M+ Stoves manufactured & distributed across Africa; home delivery in 8 countries; 2,500+ employees 50% of whom are women
- 22.5M+ lives impacted; 9.5M+ Tons of wood saved; 17.0M+ tons of CO<sub>2</sub> reduced; 17.0M+ tons of CO<sub>2</sub> reduced



# BURN is vertically integrated



## Product Design

30+ Person design team



## Manufacturing

450K/month capacity



## Distribution

Home delivery in 8 countries with 1,472 agents  
Distribution in +20 countries



## Monitoring, Issuance & sale of credits

25 person data & MRV team  
Inhouse carbon credit project development

# Our Products



# ECO A Induction Cooker



IoT enabled via GSM allows for real-time energy monitoring



“Pay As-You-Cook” enables access to low-income households



Generate ~16.7 carbon credits over 7-years



# ECO A Induction Cookware



100% made in Kenya



Stainless Steel is healthier and more durable than Aluminum or Teflon-coated cookware



# E-cooking potential in SSA

~600M people have access to electricity

80% of urban households in SSA have access to electricity

~5% use it for cooking



# How can we scale e-cooking?

## 1. E-cooking rebate programs





# Cheaper electricity is **required** to drive e-cooking adoption

Based on feasibility study of Nairobi + Kiambu (n 17,500) - Kenya

Weekly spend on cooking



Median weekly spend per household by primary fuel

# Cheaper electricity is **required** to drive e-cooking adoption

Based on MECS study and BURN Research – Uganda

Weekly spend on cooking



# The e-cooking rebate program structure



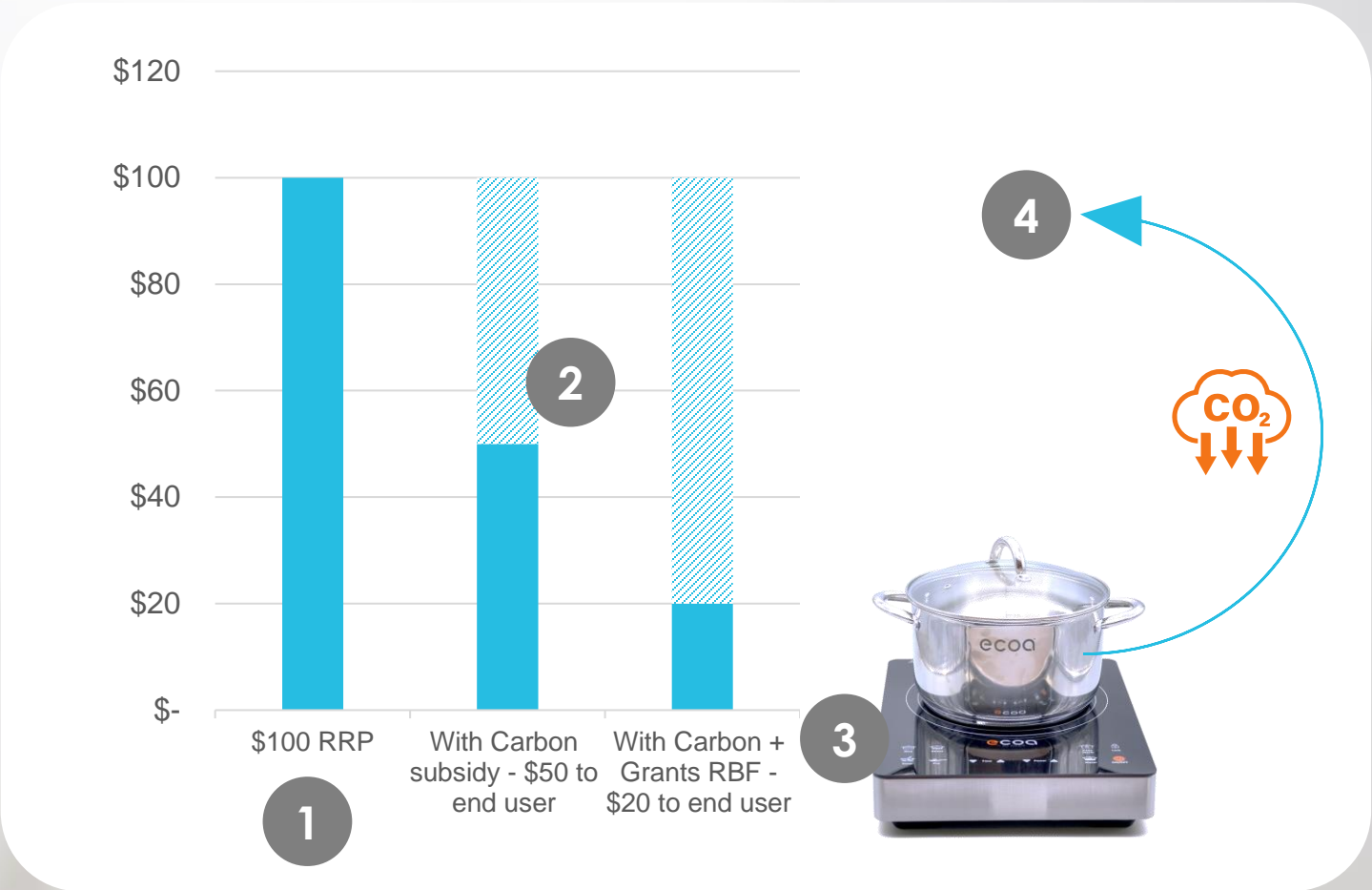
# How can we scale e-cooking?

1. E-cooking rebate programs
2. Public financed carbon projects

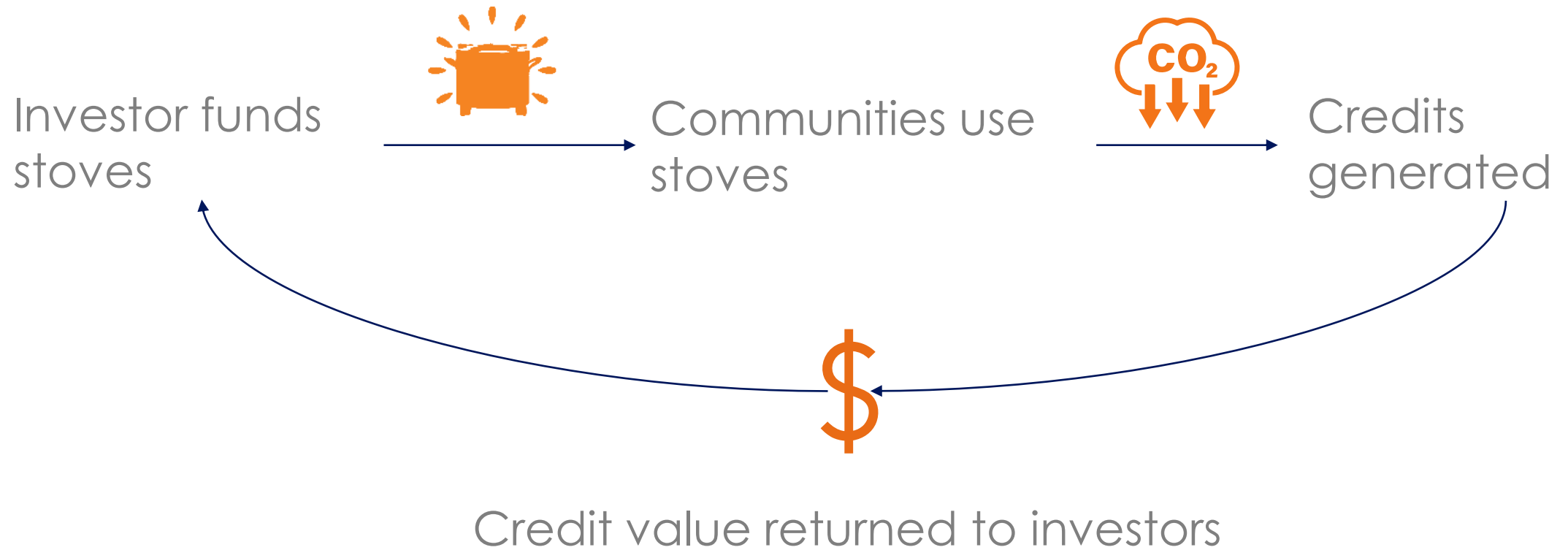


# Carbon financing is essential to bring clean cooking to urban households

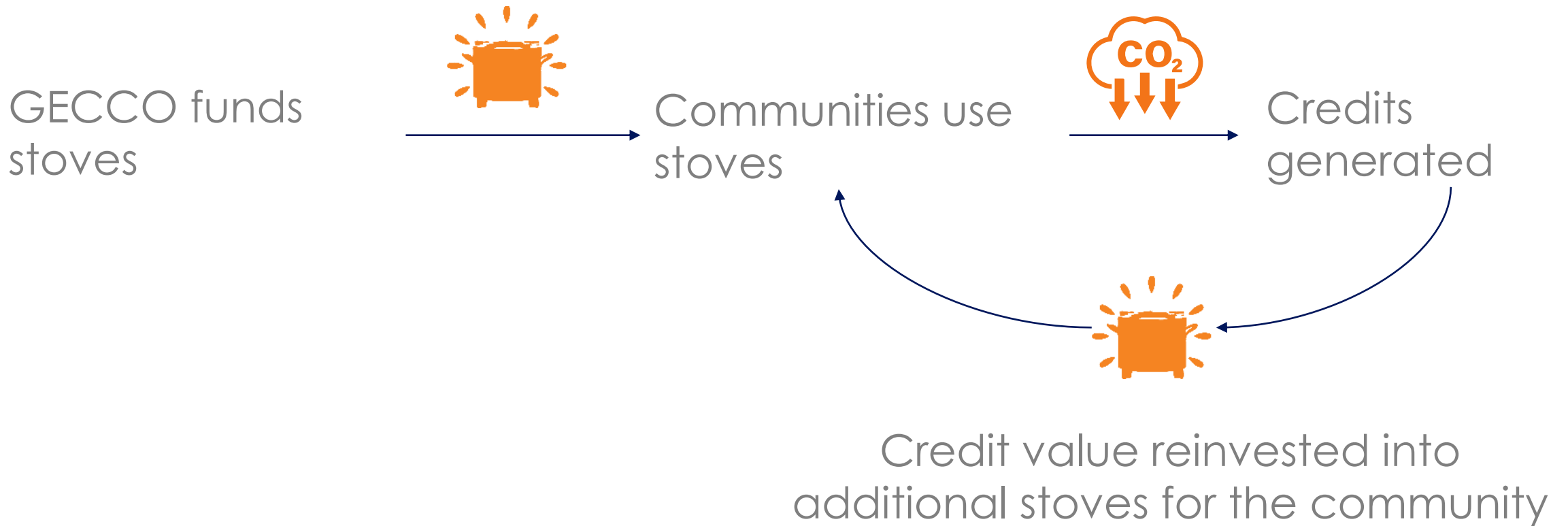
- 1 Without carbon subsidy, our electric stoves would retail for **\$100**
- 2 Carbon finance subsidy reduces retail price to **\$50**
- 3 Low-income families use their new stoves, reduce charcoal use and carbon emissions
- 4 BURN generates carbon credits; revenues repay investors, fund R&D, and scale impact for more families



# Private carbon projects - value is returned to investors



# Public financed carbon projects - value is reinvested into community



# Our wishlist

1. Grant funding to pilot e-cooking rebate programs across countries
2. Concessional funding/ reimbursable grants to fund electric cookstove carbon projects





# Bidhaa Sasa

# Business case for e-cooking: leverage existing distribution network and finance model

## Established distribution

- 50,000 efficient charcoal stoves
- 50,000 LPG
- 4,000 EPCs, natural addition to cooking range, started in 2019 (!! ) with grant (thanks MECS!)
- Took years to find the right manufacturing partner: **Tefal** designed this model with our clients' feedback
- Still no investor lined up to finance growth of EPC uptake and/or carbon project (loans or equity or offset purchase agreement)

## In rural areas

- Consumer Finance is essential, which we do with group lending
- Demonstrations are essential, which we do by leveraging clients relationships
- Subsidies are essential, but they come and go and are too short-termist (thanks CLASP!)



**Tefal**®

# What works?

## clients are happy with high quality cooker

### Clients love it, it works!

- Tefal model is tailored to our target market (no buttons, simple, durable, high quality)
- Very high satisfaction rates
- Low default rates
- Stacking is a reality, deal with it!, and we all should prefer stacking with LPG, right?
- Learning curve is real, it is personal and needs support (recipes, demonstrations)

### Potential is real, not academic

- Fuel savings are real, and customers are not stupid
- We should not underestimate time savings and convenience
- Should not underestimate impact on gender balance (my husband can cook!)



# What does not work?

## money is not following fast enough

### Appliance is too expensive

- Appliance cost should be comparable to other appliances' costs e.g. the best and more expensive charcoal stove, the nicest gas cooker
- Repairs! Who in Kenya knows how to fix an EPC, please raise your hand, we need you!
- Obsession with PAYGO, GSM, GPS, IoT, meter-everything. Ask what happened in the solar space and how much a solar system costs vs an EPC. How many metered EPCs with real clients out there today?
- Appropriate Technology (bicycle vs Rolls Royce)

### No support beyond some RBFs

- Investors are way behind and just observing for now
- RBF are great but Carbon is even better!
- Right now, we are all fighting for same pot of moneys, we are not fighting for the same customer
- So many prejudices

*The client: is this not too fancy for a rural women? Kenyan dishes are cooked with charcoal for the flavour. She is not going to change her ways, cooking is traditional*

*Electricity: access is bad, electricity is "expensive" (compared to other countries)*

# If I had a magic wand: my 3 wishes

## **Listen to the customers (all of them)**

Fight the prejudices!

## **Learn from the past, let's de-risk this market early on**

Solar Home Systems and solar lamps markets: it is NOT a success story and here we are dealing with a much cheaper appliance (USD100 vs USD200-500). 3 top companies got most of the money from investors and with one or two exceptions they still do NOT make money, there are no exits: investors are unhappy...

Investors find the cooking sector even riskier than the solar sector and are not touching it unless we also sell or mainly sell carbon offsets to rich people (in addition to the appliance, sometimes)

## **Funders: please do not chose winners too early (tech, company, country, market segment)**

Let the consumers chose.

Let the market evolve and support the entire supply chain, from China to the consumer and beyond (REPAIRS!)

# Sounding board & Panel discussion: *Scaling markets for eCooking*

# Speakers for sounding board panel



Ruth Kimani  
Senior Associate  
CLASP



Dr. Nick Rousseau  
FP for cooking appliance suppliers  
and supply chains  
MECS



# Question-answer session



# Closing remarks

Jelena Popović

Programme Advisor

EnDev/RVO



# Outlook

EnDev's contribution to GeCCo:  
Global eCooking Accelerator (GeCA)

Stay tuned for next webinars in 2024:  
eCooking webinar series “Accelerating  
Global eCooking”

- **Innovative Financial Instruments: Kick-starting and Scaling Markets for eCooking**
- **Fostering eCooking at Scale: Creating an Enabling Environment**
- **Safeguarding Energy-Efficient eCooking: Testing and Labelling of Appliances**



GLOBAL eCOOKING  
ACCELERATOR

# Thank you for your attention!

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