

# USINGINI POWER GENERATION COMPANY'S MODEL Malawi

## Practical ACTION

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Project Manager – Usingini Mini-Hydropower Project



Mzuzu Coffee Hulling Plant

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## About Practical ACTION (PA)

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- ❖ PA - implementing community-based renewable energy systems in developing countries >40 yrs
- ❖ UK-based NGO with operations across the developing world.
- ❖ Has a country office in Malawi and a regional office in Zimbabwe

### Our Energy Ambition

Help more people harness the transformational power of clean, affordable energy and to reduce avoidable deaths caused by smoke

### Our approach

Bringing rural communities, people in refugee camps, energy providers and decision makers together to put sustainable, clean energy solutions to work for the people who need them most.

Our Partners include;

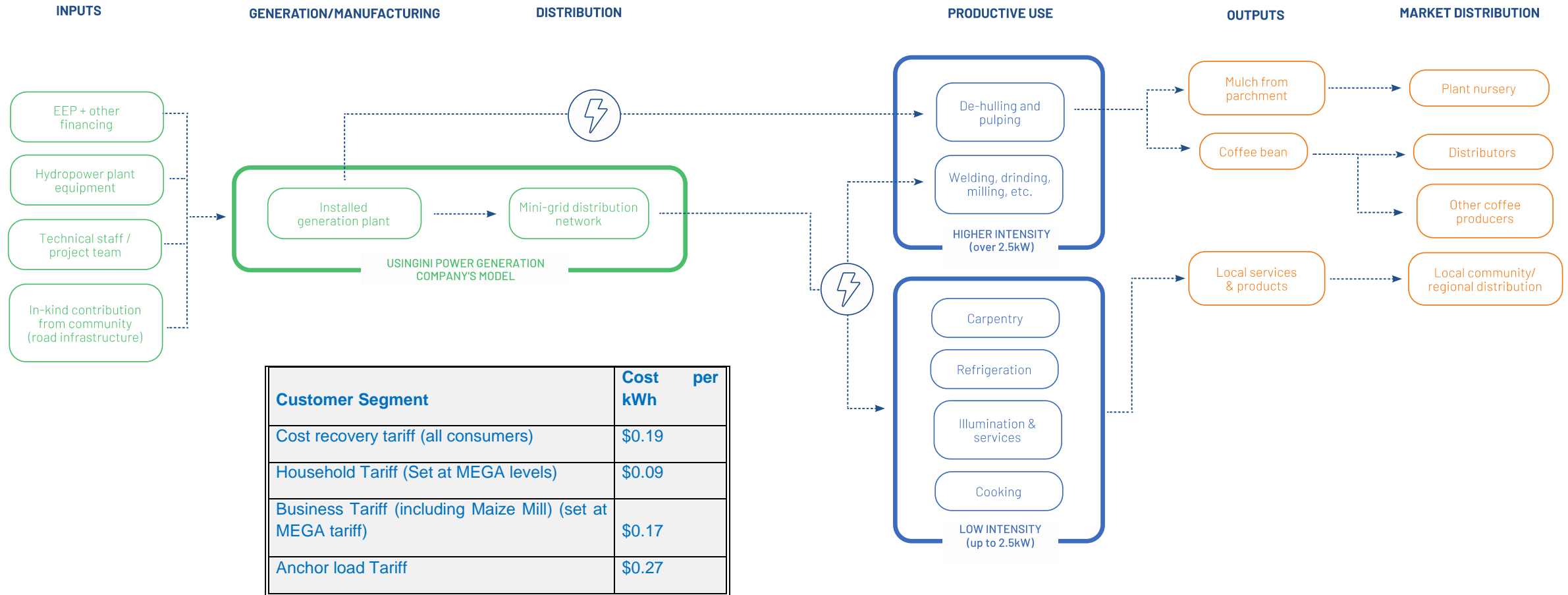
Department of Energy, EEP, UNDP/GEF, FOCUS, TEMWA, The Malawi Polytechnic, Mzuzu University, Mzuzu Coffee, The Usingini Community



Nyakatali Falls, Usingini

**Practical  
ACTION**

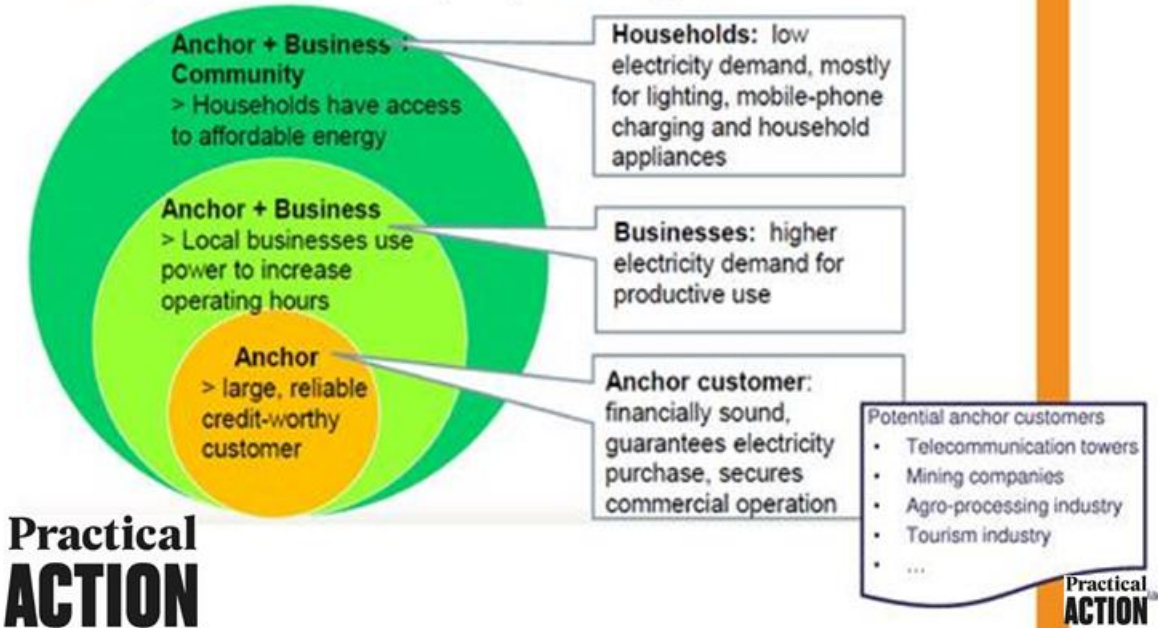
# USINGINI POWER GENERATION COMPANY'S MODEL



## Basis of the business model

- Usingini uses ABC Model
- Why this model
  - ❖ Building on MEGA, Bondo, Kavuzi Mini-grids experience
  - ❖ Incorporates Anchor customer (agro-processing – Mzuzu Coffee) for secure commercial operation
  - ❖ Considers local Businesses (shops, schools, irrigation etc) that have potential to grow into Anchor Customers
  - ❖ Includes Community interests (Community Trust) for fair Tariff Regimes
- Designed installed capacity of 300kW
- Considering providing electric cooking stoves on soft loans to communities to promote PUE
- Comprehensive PUE Assessment to be done by Mzuzu University as part of MoU
- Review of Business Plan to be done by FOCUS mainly powers of Mzuzu Coffee

## The A(nchor) – B(usiness) – C(ommunity) Model



## UPGC Management Structure

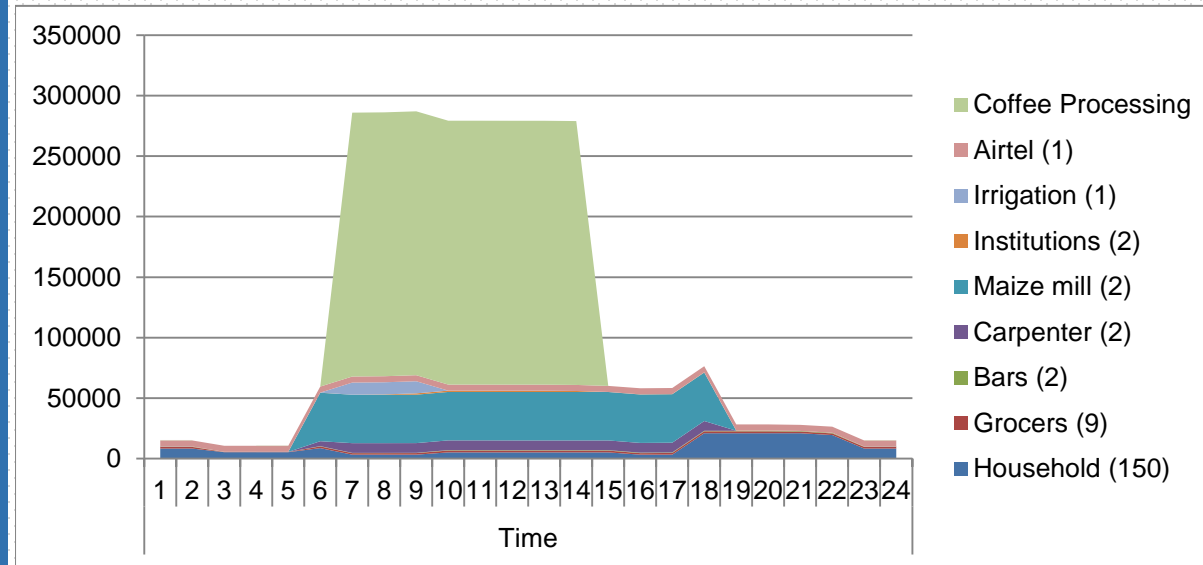




## LESSONS LEARNED

- Lessons Learnt
  - ❖ Private sector can play a major role in achieving off-grid electrification
  - ❖ Government's policies on import duty waivers for renewable energy equipment are crucial for private sector engagement – this Year's Budget Statement
  - ❖ In Malawi, financial sector willing to do business with off-grids, that have strong off-takers and attractive tariffs
- Surprises so far
  - ❖ Willingness by communities to support Project activities
  - ❖ New settlers close to the Project site (farms etc – new demand)
  - ❖ New house designs by communities

## Energy Demand 1-5 years



Estimated energy demand within 1-5 years

### Coffee Processing

- ❖ Mzuzu Coffee farm 137.6ha (364,000 trees) since 2011
- ❖ 600,000 coffee trees (240ha) expected around 350MT of coffee/ green beans
- ❖ + Beekeeping & horticulture
- ❖ Expected + irrigation, primary & secondary processing, machine, housing, school and eventually health facilities.
- ❖ Employment >150 people (500 people peak season)
- ❖ Current demand 110KW, with a 50KW pulper, five 10KW pulperies & three 2.5KVA generators
- ❖ Demand expected to around 600kW in 5-10yrs
- ❖ Planning to shift processing to night to reduce peak demand during the afternoon
- ❖ Demand required 3-4 months a year – no harvesting of coffee Sept & May.
- ❖ To process macadamia nuts during the closed season 5yrs for macadamia to mature

## Usingini micro-hydro power scheme – Local entrepreneurs/businesses transformation map

### EXPECTATIONS

- Anticipated challenges
  - ❖ Increased construction cost due to terrain unfriendliness/accessibility
  - ❖ Operational sustainability in the first 3 years – low customer base
  - ❖ UPGC and Community Trust tussling over tariff review
- Expected results
  - ❖ Growing customer base over next 5 years after commissioning
  - ❖ Local businesses graduating into anchor customers
  - ❖ Better living standards for residents around Usingini Project site

### Better living standards for local entrepreneurs in Usingini & the community at large

