Off – Grid Energy Solutions – Role of Subsidies.

Joseph Nganga
CEO
Renewable Energy Ventures Ltd.
jnganga@africarenewables.com
www.africarenewables.com

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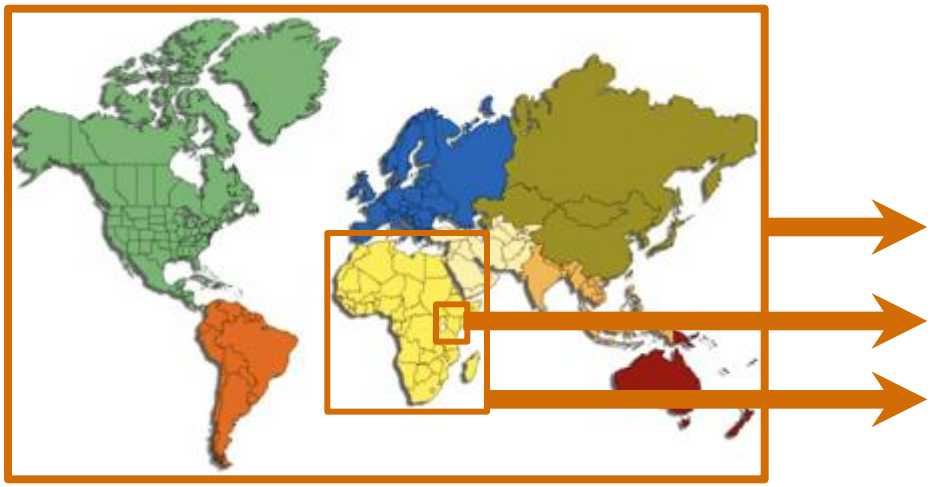
Population without Regular Access to Electricity



Geography	Size
Worldwide[1)]	1.6B
Kenya[2)]	30M
Africa[1)]	589M

1) Lighting Africa (editor): Lighting Africa Progress Report 2009-2010. 2010, p. 10.

2) Estimation based on: Elvide, Christopher D. : Who's in the Dark: Satellite Based Estimates of Electrification Rates. In: Urban Remote Sensing, Xiaojun Yang (editor). Chichster, UK, 2009, p. 15.

Renewable Energy Ventures

REV is a RE and EE project development and advisory firm

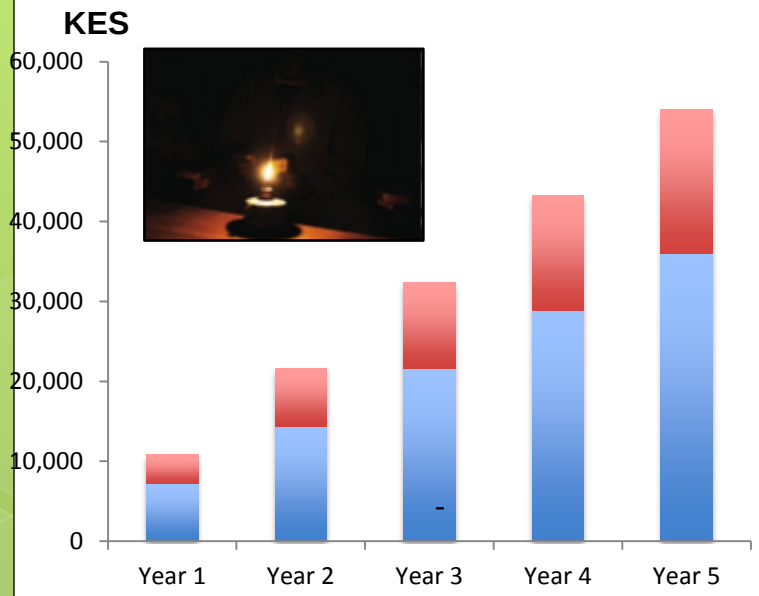
REV

- Consulting
- Household Solutions through the „Solanterns Initiative“
- RE & EE Project Development


Why are we in this space?
Because no one should have to do without modern clean energy

Economics of off – grid Renewable Energy solutions
an illustration

Kerosene



Solanterns

Break even will be achieved after 5 months of purchase

* Average costs per month Lightning Africa Annual Report 2011

Challenges

- Long lead times – as is normal for energy projects globally.
- Still emerging policies
- Limited early stage capital
- Limited local technical expertise
- Limited infrastructure
- Project size relative to larger economies
- Need to adapt technologies for local conditions
- Limited consumer finance

Off – Grid Business Models

Some examples

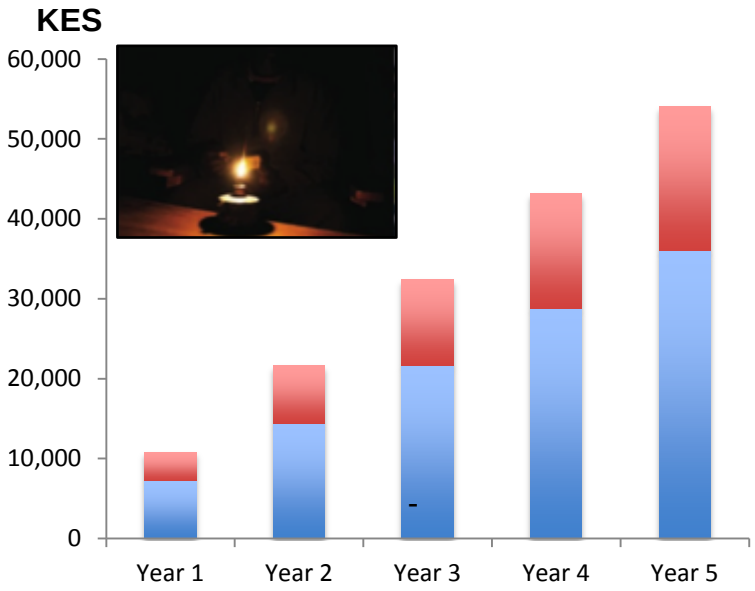
- Smart Mini – Grids
  - Locally owned and operated
  - Tied to utility
  - Hybrid generation
- Rental Models for appliances
- Appliance distribution models tied to micro – lending/micro - leasing
- Cogeneration

Role of Subsidies – an entrepreneur‘s perspective

CAPEX

Economics of off – grid Renewable Energy solutions an illustration

Kerosene



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Examples of CAPEX Subsidies

- Subsidies for purchase of mini-grid generation and distribution equipment
- Subsidies for purchase of appliances such as solar lanterns, solar home systems, biogas digesters etc

Subsidies may be in the form of rebates on equipment, discounted financing for the same equipment etc

Why CAPEX?

- Limited financing for renewable energy equipment
- Subsidized CAPEX on mini - grids = Lower tariffs for consumers + quicker payback for operators
- If you build it, they will come…….but only at the right price
- Subsidizing CAPEX ensures sustainability.
- CAPEX subsidies cap subsidy provider's exposure

Conclusion

- Enormous need for off grid energy solutions
- Existing and emerging business models that meet these needs
- Significant challenges exist that call for appropriate interventions
- Subsidies have a role to play
- Subsidizing capital costs at consumer level for appliances and generation and distribution equipment for mini – grid operators increases access to energy, ensures sustainability while capping subsidy provider's exposure.

Thank You!

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