



Renewable Energy Ventures (K) Ltd

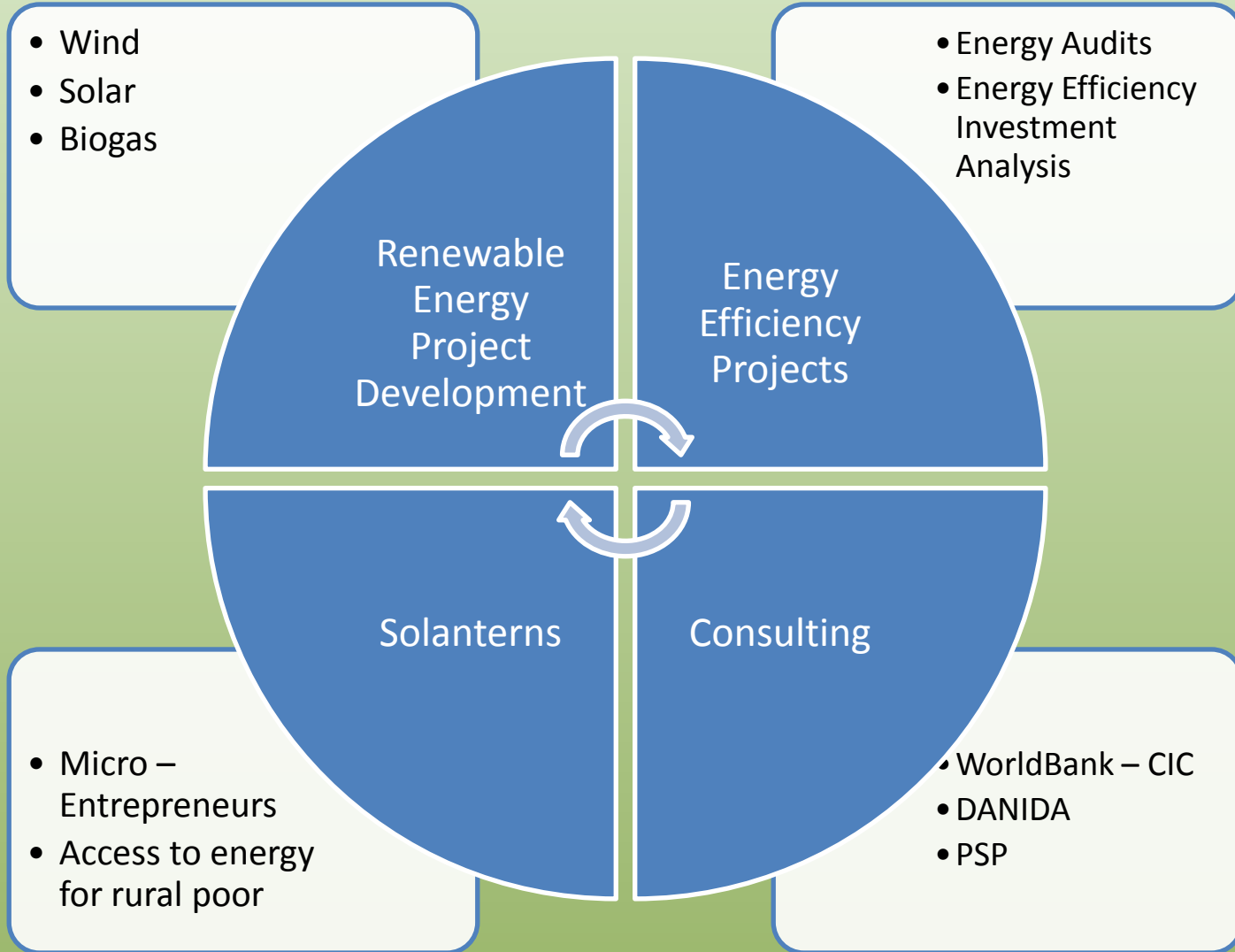
• CLEAN • EFFICIENT • AFFORDABLE • SMART •

Joseph Nganga

inganga@africarenewables.com

+254 721 211 406

About us



Why Renewable Energy?

Renewable Energy Tech

- Environmentally friendly
- Suitable even for distributed generation
- Expensive to acquire cheap to run
- Limited generation costs fluctuations
- Energy independence
- Jobs

Fossil fuel Tech

- Environmentally hostile
- Optimal when centralized.
- Cheap to acquire, expensive over the life cycle.
- Volatile costs as a function of global commodity prices
- Subject to external forces
- Not so many.

Choosing the RE Technology

- Enormous selection of re technologies.
- Choice should always be driven by:
 - Energy amount needed – kWhs
 - Energy type needed
 - Electricity generation? thermal?
 - Base-load, peaking power etc.
 - Application
 - Stand alone or grid tied?
 - Location and resource availability.
 - What RE resources are optimal in the location
 - What infrastructure is needed and is it possible?
 - Alternative sources
 - Which of the possible options is best suited for the place.
 - Cost of electricity produced – life cycle costs vs. cost of equipment.

Quick Illustration

Solar Lantern - \$25



- Brighter
- Cheaper
- Healthier
- Safer
- Limited energy cost variability

Kerosene Lantern - \$4



- Dimmer
- \$100+ more expensive over a 3yr period.
- Indoor air pollutant
- Fire hazard
- Volatile costs.

Another example

Small Hydro \$1,000/kW

- Plant life – 30+ yrs
- Per kWh cost of generation - \$0.04 - \$0.10
- Environmentally friendly
- Predictable energy costs
- Energy Independence

Diesel Generator \$200/kW

- Plant life – 5 to 10yrs
- Per kWh cost of generation - \$0.20 to \$0.40
- Environmentally hostile
- Volatile energy costs
- Subject to global factors

Technology discussion

- Given the wide choice of RE technologies available, how do we prioritize and accelerate adoption?
- Which technologies provide the best options for what scenarios? Best options on a holistic basis i.e., not just energy generated, but also cost of that generation, jobs created etc.



Renewable Energy Ventures (K) Ltd

• CLEAN • EFFICIENT • AFFORDABLE • SMART •

Joseph Nganga

jnganga@africarenewables.com

www.africarenewables.com

+254 721 211 406