



Accelerating Rural Electrification through Energy Cooperatives in Uganda

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Presentation Layout

- Introduction
- History of Energy Cooperatives
- Electricity Sector in Uganda
- Energy Cooperatives in Uganda
 - Management Structure of Cooperatives
 - Operation of the Concessions
- Challenges faced by cooperatives
- Possible Solutions
- Conclusions

Introduction

- Sector reforms in most countries in the 80's and 90's led to heavy private investment.
- Many public parastatals were privatised and IPPs encouraged to participate.
- Private companies are motivated by profit
- This led to concentration on urban areas and neglect of the rural areas.

Introduction

- Many countries have put in place bodies to ensure faster electrification in the rural area.
- Uganda (REA), Kenya, Tanzania, Zambia, etc have bodies responsible for rural electrification.
- Energy cooperatives can be a way through which rural electrification can be achieved.

History of energy cooperatives

- Energy cooperatives date back to the 1800's.
- Became more popular in the 1930's and 1940's in the US.
- Most rural electrification done through energy cooperatives.
- Philippines, Guatemala, and Costa Rica have had successes using this model of rural electrification.
- Bangladesh without any rural electrification strategy in the last 25 years has improved through energy cooperatives.

Electricity Sector in Uganda

- Unbundled in early the early 2000s into generation, transmission and distribution.
- Generation has many private operators, with current installed capacity of 587MW.
- (Excludes 250MW Bujagali expected in Dec 2011).
- Firm generation capacity is about 335MW
- Peak demand is currently about 445MW
- Deficit is up to 100MW.

Electricity Sector in Uganda

- Only one transmission company (government owned).
- Responsible for purchasing and selling all the power generated.
- There are 6 distribution companies.
- One (Umeme), buys 97% of the energy.
- The other small distribution companies are rural based.
- 500000 h/h connected to the grid of the 4.7m h/h in Uganda (just over 10% connectivity).

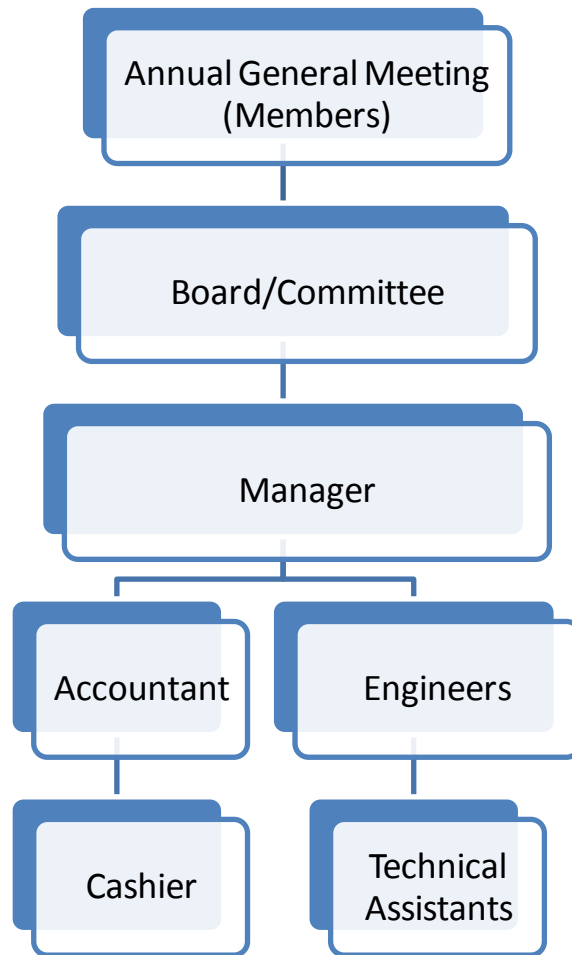
Energy Cooperatives in Uganda

- Concept of cooperatives started by REA in 2007
- Currently two cooperatives(PACMECS, and BECS) in Uganda on a pilot basis.
- Owned by the consumers in the two different rural areas.
- Started operations in late 2009 and have been in operation for just over two years.

Management Structure

- The board (consisting of 9 members) manages the cooperative on behalf of the members.
- The board is appointed by the general assembly.
- The board manages the affairs of the cooperative through a management team.
- The management team carries out the day to day activities of the cooperative.

Management Structure cont.....



Funds and operations of the energy the cooperatives

- REA concenssioned their assets to the two cooperatives for 10 years.
- Energy cooperatives purchase power from the transmission company and sell to the rural consumers.
- In addition to sale of energy, cooperatives charge members a subscription fee, as well as membership fees.
- These sources of revenue ensure the survival of the cooperatives.

Current performance of the energy cooperatives

- Connected about 1000 customers in each of the concession areas (although the target was 2000)
- Commercial losses very minimal
- Technical losses as high as 40% due to no load losses.
- Operation and maintenance costs are twice as high as the targeted.

Challenges facing the cooperatives in Uganda

- Technical management capacity
Few employees have required qualifications
Limitation also due to lack of funds
- Tedious decision making process
- High technical losses
- Low customer connections

Challenges cont..

- Financial sustainability is not guaranteed
High expenditure compared to the revenues realized.
- Wheeling challenge

Possible Solutions

- Training of the management team
- Sensitization of the rural community to enable participation
- Holistic approach to energy business-cottage industry should be encouraged by government
- Revise criteria for rural electrification identification
- Increase more subsidies especially in network extension

Conclusion

- Different countries may have different unique reasons for the failure or success of rural electrification.
- A hybrid of the success factors in different countries however, will surely deliver rural electrification.

Thank You for Listening

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