

### Global Energy Network for Urban Settlements

### Promoting Energy Access for the Urban Poor in Africa

# Electrification for the Urban poor in Uganda – experiences and coverage plans

PRESENTATION BY

Eng. M.Murengezi Advisor to the Chairman, Energy and Mineral Sector Working Group.



## SUMMARY

- BACKGROUND
- POWER SECTOR STRUCTURE
- SLUM ELECTRIFICATION ISSUES
- STAKEHOLDERS IN SLUM ELECTRIFICATION
- PLANS FOR SLUM ELECTRIFICATION
- CONCLUSIONS



### **Background Information on Uganda**

•Population: 30million with 20% (6m) in urban areas mainly in the dense populated informal settlements (slums).

•The national population growth rate is a high 3.2% per Annum

•Uganda is mainly an agricultural economy. Agriculture is a key activity even in urban areas.

•In rural areas, the population is scattered and therefore more difficult and more expensive to serve with electricity than concentrated areas.

•National electricity coverage: 12%. Rural is 6% and urban coverage is about 40%.

•Electrification statistics for informal settlements (slums) are not available.





### POWER SECTOR STRUCTURE

- Uganda's Power sector is heavily privatized.
- ALL GENERATION IS UNDER PRIVATE HANDS. The hydro power plant at Jinja is state owned but leased to private sector for operation under a 20 year concession.
- TRANSMISSION IS UNDER A PUBLIC COMPANY (Uganda Electricity Transmission Company Limited, UETCL, operating at voltages above 33KV). UETCL handles transmission of electricity in Uganda as the sole bulk purchaser from generation plants, import and export of electricity, and is also the system operator.
- DISTRIBUTION IS ALSO UNDER THE PRIVATE SECTOR (OPERATIONALLY) – UMEME OPERATING THE MAIN GRID WITH OBLIGATIONS WITHIN A 1KM FOOTPRINT. The assets are Government owned but leased to the private sector under a 20 year concession. Other private companies operating grid extensions ( Ferdsult, Kilembe investments, etc) and independent mini grids ( eg West Nile under Wenreco)
- The main cities and municipalities(Kampala, Entebbe, Jinja, Mbarara, Mbale, Gulu, etc) with their peri urban areas are supplied with electricity by the private company, Umeme.
- Tariffs are approved by the Electricity Regulatory Authority (ERA).



- Uganda has had little attention to electrification for informal settlements (slums)! More attention has been to rural electrification
- Uganda has many slums and they are growing every day.
- Particular attention is normally paid under a major slum upgrading project eg the Namwongo upgrading project.
- BUT the slum only moved to the lower Namwongo into the wetland!



- Most slums are in or close to wetlands where land is available (Bwaise, Namwongo etc).
- Others are in railway reserves.
- The slums are prone to floods during wet seasons.



•Uganda's electricity is very expensive (Domestic tariff is Ush 426 per KWhr = US\$ cents22) and therefore hardly affordable by the poor in the informal settlements.

- •Slums are known for high energy losses.
- •In Kampala's slums, to reduce losses, sometime meters were hanged on poles to reduce meter by-passes.
- •Access to electricity remains very poor in Uganda in general but more so in the informal settlements.



- Slums need electricity for home use and also for a lot of artisanal works (welding, machining, grain milling, food processing etc.)
- Home use includes music, TV, business (selling cold drinks, hair dressing etc)
- To fully address electrification for the informal settlements, one must first identify the key stakeholders.





### STAKEHOLDERS IN SLUM ELECTRIFICATION

- Slum electrification has many stakeholders because electricity transforms people! Electricity is a catalyst of development whether in slums or not. The first stakeholders are the slum people together with their landlords.
- Leaders are major stakeholders energy for the people. Electricity is a service to be delivered by politicians!!
- Security agencies are major-Switch off lights and insecurity is up!
- Government ministries eg.Health needs electricity for better services (equipment like x-ray, scanners, theatre, labs, lighting etc) Education (lighting, labs, workshops, ICTs, etc), Water supply, Agriculture(agro processing is a key activity in slum areas, food preservation etc).
- *ICTs* for the general public (we are in the information age, TVs and videos, radio
- Entertainment industry is key in slums
- Private sector service providers
- Financial institutions and donors.



### JGANDA'S PLANS FOR SLUM ELECTRIFICATION

•Slum electrification is considered as part of national coverage plans and also as part of rural electrification.

•Current plans include use of Global Partnership Output Based Aid (GPOBA).

•In Uganda, the water sector is ahead of electricity having used GPOBA to cover many slum areas. They mapped out the cities, identifying poor areas to benefit from GPOBA subsidies to allow connection to water.

• Under GPOBA, private sector providers partner with Government to use connection subsidies to poor people in rural areas and urban slums.

•Outputs will be number of connections in agreed well demarcated areas with consumers paying about Ushs.50,000 (US\$ 24) and the top up paid under GPOBA after verification.

•Under the Energy Sector OBA Schemes (ESOBAS), the target is to connect at least 200,000 homes in a period of around 2 years.

•Beneficiaries will be un connected homes in areas which have been electrified for at least 18months (assumed poorest)



#### UGANDA'S PLANS FOR SLUM ELECTRIFICATION CONT'D

•Uganda is working with several partners to put in place the GPOBA approach planned for early 2010 with about US\$15million.

•Also working with microfinance institutions, which are active in Uganda's slums providing loans, to see how they can fund electricity connections.

•On solar connections, micro finance institutions are already picking up but on grid connections, they are yet to begin.

•GPOBA will however not address the high tariff constraint.

•Several committees are looking at tariffs and losses with a view to bringing both down without affecting private sector operations.

•One line of thought is to bulk meter slum areas so that they manage their individual supply. This can reduce losses and tariffs since bulk tariffs are lower.

•Free energy saving bulbs have been given out and this will continue to allow the poor afford electricity charges.

•Pre paid metering is to be used to allow bill management.



### conclusions

- Electricity is a necessary input into slum economic activities.
- Electricity transforms people and the lives of slum dwellers can improve with electricity.
- Uganda's Power Sector is highly privatized.
- Uganda has so far done little for slum electrification but major plans are under way based on Public Private Partnerships under GPOBA to benefit slum electrification.
- Under GPOBA, national connections are to be accelerated targeting poor communities.
- Tariffs remain a challenge but this is being addressed.
- The future of slum electrification is bright.



### Thank You !!!

