



UGANDA COUNTRY REPORT; ENERGY POLICY

**Presented at
JICA TOKYO TRAINING; ENERGY POLICY
31st May 2015 – 20th June 2015**

By

MARTIN MUTABINGWA

Electrical Engineer, Electric Power Department

Minister of Energy and Mineral Development,

UGANDA



OUTLINE OF PRESENTATION

- Country profile
- Scope of energy sector in Uganda
- Institutional frame work
- Policy frame work
- Energy Supply & Demand
- Outlook at Supply & Demand
- Challenges in energy sector policy
- Training needs

Country profile

- Uganda is a land locked country in East Africa.
- It also lies within the region known as the Nile basin and has a generally equatorial climate.
- With a total population of 37.58 million (as per 2014 census), Uganda has a GDP (PPP) per capita of \$1,414 and GDP (Nominal) per capita of \$589.





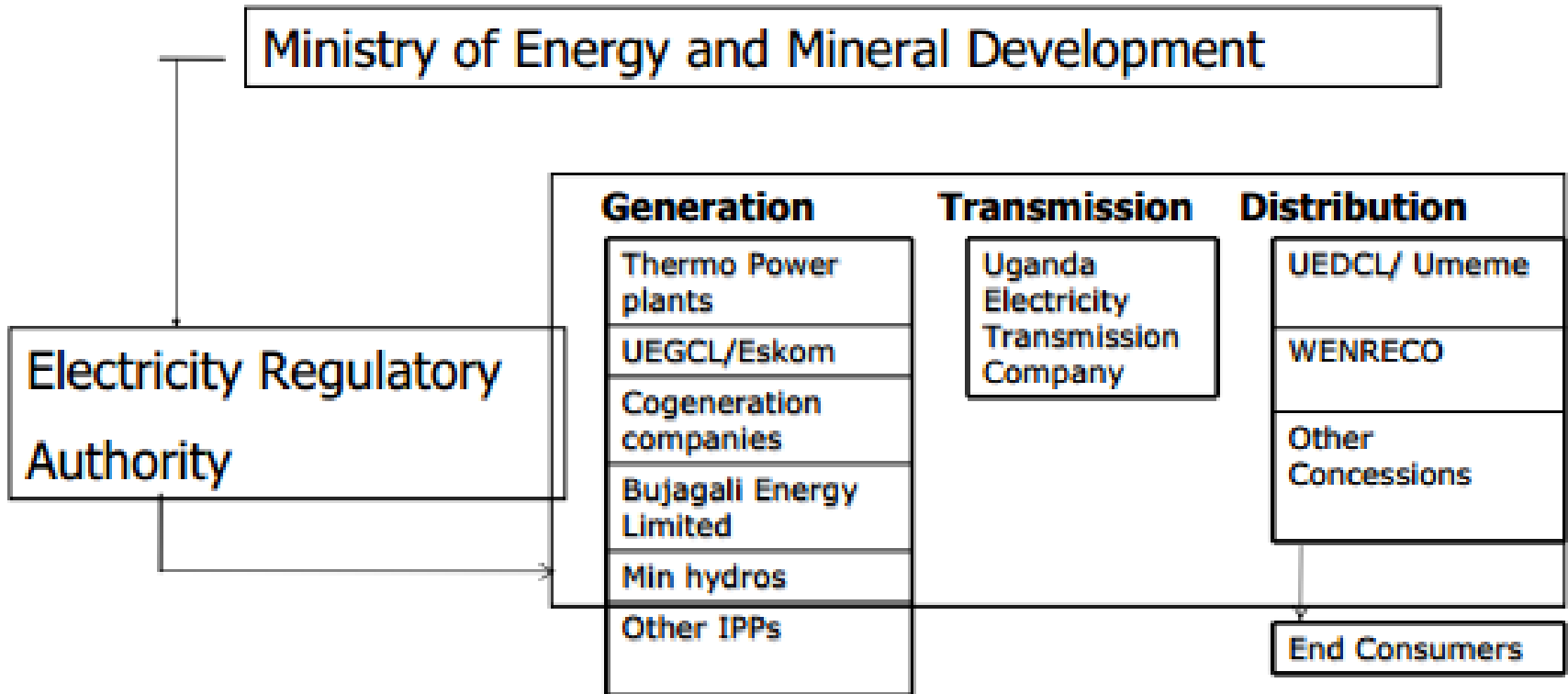
1.0 INTRODUCTION



The scope of the Energy Sector

- **Power Subsector**
 - Power Generation
 - Transmission
 - Distribution/ Rural Electrification
- **Renewable Energy**
 - Biomass (Wood & Charcoal, Cogeneration)
 - Small Hydro, Solar, Wind, Geothermal
- **Atomic Energy**
 - Nuclear for Power Production
- **Energy Efficiency**
 - This is cross cutting for all forms of Energy.

Institutional framework





The key priority in the Energy Sector



- To increase electricity generation capacity and develop the transmission network;
- To increase access to modern energy services through rural electrification and renewable energy development;
- to promote the efficient utilization of energy resources and reduction in power losses;



Policy framework



2.1 Legal Framework

The Electricity Act, 1999:

The salient features of the Act are to provide the enabling legislation for:

- Liberalising the electricity industry;
- Unbundling of the Uganda Electricity Board into three entities namely generation, transmission and distribution;
- The establishment of Electricity Regulatory Authority (the “ERA”) to regulate the sector;



2.1 Salient features of the Act Cont'd

- The establishment of the Rural Electrification Fund (the “REF”), with the main objective of enhancing rural access to electricity; and
- The establishment of the Electricity Dispute Tribunal (the “EDT”) that has jurisdiction to hear and determine electricity sector disputes which are referred to it.



2.2 The Energy Policy for Uganda 2002

Policy Goal

To meet the energy needs of Uganda's population for social and economic development in an environmentally sustainable manner;

- To establish the availability, potential and demand of the various energy resources in the country
- To increase access to modern affordable and reliable energy services as a contribution to poverty eradication
- To improve energy governance and administration
- To stimulate economic dev't
- To manage energy-related environmental impacts



2.3 Renewable Energy Policy for Uganda 2007

- It aims to provide a framework to increase in significant proportions the contribution of renewable energy in the energy mix.
- Main features:
 - Introduced the feed in tariffs.
 - Standardized Power Purchase Agreements.
 - Obligation of fossil fuel companies to mix products with biofuels up to 20%.
 - Tax incentives on renewable energy technologies.



Supply and Demand

- Biomass constitutes about 93% of energy consumption mainly in traditional form.
- Hydropower; out of a potential of over 3000MW, less than 700MW has been exploited
- Peat
- Renewable(solar, geothermal, small hydros, wind)

Supply and Demand

| | Plant | Installed capacity (MW) | Current Generation Capacity |
|----------|-------------------------------------|--------------------------------|------------------------------------|
| 1 | Nalubaale and Kiira | 380 | 210 |
| 2 | Bujagali HPP | 250 | 250 |
| 3 | Thermal Plants | 100 | 100 |
| 4 | Cogeneration by Sugar Plants | 31.5 | 15 |
| 5 | Mini Hydros | 64.5 | 30 |
| | TOTALS | 826 | 605 |

- Peak demand is currently at about 480 - 490 MW
- On average the power demand has been growing at 10%.



Outlook at supply and demand

Given the growing demand, Uganda has laid out strategies in line with the energy policies and energy sector policies to increase access to power as well as increase power supply.

a) Development of Large hydropower Projects

There are already a number of large hydropower projects being developed in line with the national development plan. Currently under construction are;

- Karuma Hydropower plant – 600MW
- Isimba Hydropower project – 183MW



Outlook at supply and demand

b) Access to Rural Electrification

- The policy has favoured the implementation of a number of rural electrification schemes and increased access to modern energy. The main targets are district headquarters, production areas and communities which create nuclei for rural social and economic transformation.
- The delivery mode includes, grid extensions, isolated grid, solar PV for institutions (health centers and schools) and households.



Outlook at supply and demand

c) Renewable Energy and energy Efficiency

- About 50 small hydropower sites with a total capacity of 164MW.
- Co-generation with sugar factories
- Solar photovoltaic systems
- Supply of energy saving equipment (efficient lighting tech, efficient cook stoves, ovens, soft starters and capacitor banks)

d) Nuclear energy



Challenges in energy Sector

- Capital intensive, long payback periods.
- Policy direction for nuclear, solar, geothermal and gas.
- Inadequate data and information on the potential of various energy sources.
- Inexistence of gas infrastructure to support the development and use of gas
- Other renewable energy sources though abundant have not been fully exploited



Way Forward

Since the last policies were established, a number of developments have arisen and this has thus instigated a process of reviewing the existing energy policies to cater for the current energy position of the country;

- ***Discovery of Oil and Gas:***
- ***New financing options:***
- ***Sustainable Energy for All Initiative:***
- ***The Vision 2040;***



Training Points Of Interest

- Monitoring and evaluation mechanism with clear milestones and analytical tools to observe implementation of policy
- Demand Forecasting
- Environment preservation.



THANK YOU

Contact : report@tky.ieej.or.jp