

Status of Energy Efficiency Implementation in Zambia

Energy Efficiency in Sub-Saharan African Cities Workshop

Nairobi, Kenya, 26 – 27 October 2015

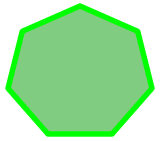
Presentation from Zambia and Lusaka City

Participants: Mr. Mafayo Zambia, Senior Energy Officer, Department of Energy
Mr. George Nyendwa, Mayor, City of Lusaka
Mr. Readlay Makaliki, Senior Manager (DSM), ZESCO Ltd





CONTENTS

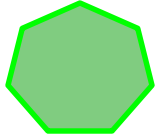


- 1. Overview of Energy Sector**
- 2. Review of Current EE Strategies and Policies**
 - 2.1 National level**
 - 2.2 City level**
- 3. Stakeholder Participation**
- 4. Energy Efficiency Initiatives at National/City Level**





1. OVERVIEW OF ENERGY SECTOR

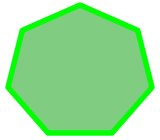


- Installed Hydropower capacity is 2,316MW while estimated potential is 6000MW
- 99% of the country's electricity is generated from hydro
- 25% of population have access to electricity (Urban 48% & Rural 4%)
- **2030 Targets:** 48% to 99% for Urban and 3% to 51% for Rural.
- Over 70% of total energy is derived from wood fuel (firewood and charcoal) for majority of households
- Solar : 6-8 hrs./day, with energy output of 5.5kwh/m²/day
- Fair potential for wind and geothermal

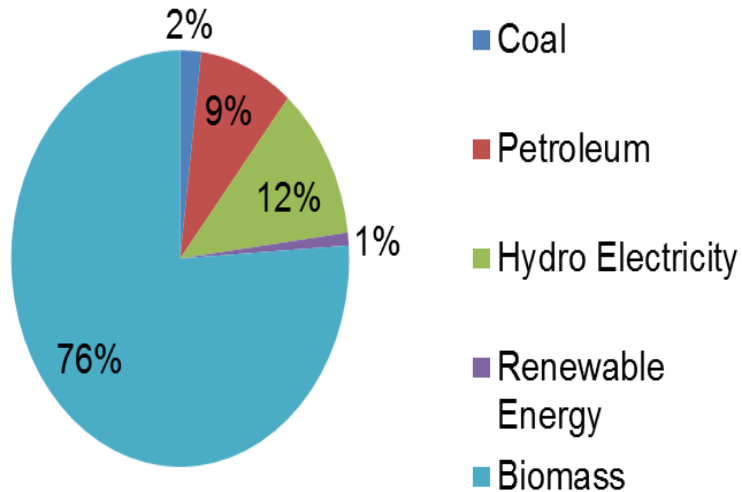




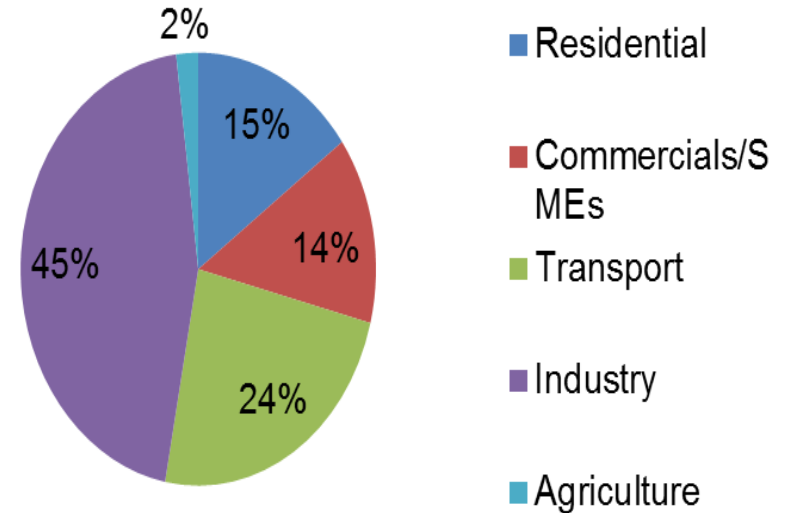
1. OVERVIEW OF ENERGY SECTOR



1.1 Primary Energy supply Mix

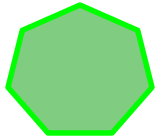


1.3 Final Energy Consumption Mix





2. Review of Current EE Strategies and Policies



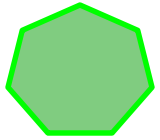
2.1 National level

- The Ministry of Energy and Water Development is mandated to oversee policy formulation and facilitate implementation of Energy programs including Energy Efficiency.
- Currently there is no law on Energy Efficiency in Zambia. However, legislation available are Electricity Act, Energy Regulation Act, Rural Electrification Act.
- Further implementation of Energy Efficiency programs is guided by the National Energy Policy of 2008.
- No dedicated Energy Efficiency Agency exists in Zambia. Activities implemented by Ministry, ZESCO Limited, Regulator, LCC.
- Currently no energy efficiency labelling, standards or building codes exist. However, there are efforts to develop EE standards through the regulator and national standards body.





2.1 National level

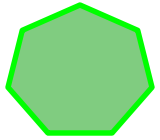


- The main sectors being targeted include:
 - **Buildings (public and private)** – Efficient lighting, Solar Water Heating.
 - **Appliances & equipment** - Tax waivers on importation of energy efficient equipment. Working with UNEP/en.lighten for appliance labelling through SAPP.
 - **Industry** – incentives for power correction equipment and energy audits, power factor surcharge starts Jan 2016 (0.92 target)
 - **Households** – Promotion of efficient use and production of charcoal, improved cook stoves, LPG for cooking and heating
 - **Transport** – High import duty on vehicle with high engine capacity, Introduction of carbon tax, surcharge recently introduced for vehicle imports older than 5 years.
- The main forms of energy being targeted are electricity, biomass and petroleum.
- There are currently no set Energy Efficiency targets.





2.2 City level



Energy efficiency strategies and policies include;

- The Lusaka City Five Year Strategic Master Plan and
- The Comprehensive Urban Development Plan – Vision 2030.

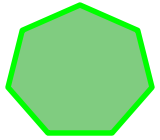
The council is mandated to:

- Improvement of the road network to reduce energy consumption of vehicles
- Integrating reliable public buses, light rail transit systems and none motorised transport such as walkways and cycle tracks.
- Installation of energy efficient street lighting systems and solar power units.
- Promoting use of green technologies in all sectors such as the use of solar geysers and solar power
- Waste management. The is exploring and reviewing waste recycling systems and waste-energy generation systems.





2.2 City level

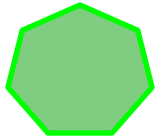


- Currently no municipal law exists for EE.
- Main sectors targeted: building/ transport/ appliances and equipment/ industry/ power gen/ district energy/ city planning
- The city does not monitor GHG emissions
- *EE is considered as an important driver of sustainable development in the city as Zambia depends on fossil fuels for transportation and various industrial processes*
- *EE is recognised to contribute towards climate change mitigation and to adaptation, and improving access to energy services*
- Consumers are encouraged to use electrical energy efficiently to improve access
- No specific financing mechanisms exist at city or national level for EE programs. EE activities are funded from national budget and the utility.
- *Public private partnerships are also encouraged.*





3. Participation - Stakeholders

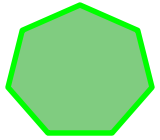


- The Key institutions involved in Energy efficiency programs include:
 - **Department of Energy** – responsible for policy formulation
 - **Lusaka City Council** - implementation of national policy under the Local Government Act.
 - **Energy Regulation Board** – responsible for regulating the energy sector
 - **ZESCO Limited** – national utility responsible for power generation, transmission, distribution and supply
 - **Rural electrification Authority** – responsible for electrifying rural areas with renewable and energy efficient technology
 - **Zambia Bureau of Standards** – responsible development of national standards
 - **Zambia Environmental Management Agency** – regulatory body for environmental issues.
- The major cooperating partners include: World Bank, European Union, African Development Bank, SIDA, JICA and USAID.





4. Energy Efficiency initiatives (national Level)



Energy Efficient initiatives at national level include:

- The Ministry is considering to phase out the use of incandescent bulbs in the country.
- Tax waivers have been introduced on importation of energy efficient equipment. SI 32 & 33 of 2008.
- Introduction of prepaid metering system for public and private buildings
- Free distribution of Compact Fluorescent Lamps by ZESCO Limited. (1million bulbs each year). So far in excess of 94MW realised.
- Free Energy audits by ZSECO limited
- Introduction of low power factor surcharge for large power users (industry, mining, agriculture)
- Energy saving awareness campaigns, e.g. commemoration of annual energy Week.



Thank you for your attention!!!!

