

Energy Efficiency (EE) Practices

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Presentation from Botswana, Lobatse Town Council

**Energy Efficiency in Sub-Saharan African Cities
SE4All and the Covenant of mayors in Africa
Workshop – Nairobi, 26-27 October 2015**

Review of current EE strategies and policies (National level)

- **The Ministry Of Minerals, Energy and Water Resources through the Department of Energy has the ultimate responsibility for developing and implementing government policy on energy.**
- **The energy sector does not have a regulating authority as would normally be the case. Some of the functions of such a body such as tariff review and approval are provided by the Ministry and DoE, but these do not have the capacity to cover all aspects of regulation.**

Review of current EE strategies and policies (National level)

THE ENERGY POLICY

It includes a policy goal for optimum energy utilisation and environmental protection. It set a number of routes to energy efficiency;

- Set minimum EE & C standards for government investment and operations.**
- Establish awareness programs for all sectors.**
- Improve knowledge for practitioners.**
- Incorporate EE into training and education programs in all levels of education.**
- Establish investment programs for EE in all sectors.**

Review of current energy efficiency strategies and policies (National level)

- **Renewable Energy Strategy and Energy Efficiency Strategy**

The strategies are being developed with the assistance of World Bank and the activities are on going.

- **Renewable Energy Fund**

A fund is being set up to stimulate the uptake of RE Technologies, there is a possibility of consolidating existing energy funds (NPF & NEF) to come up with one ENERGY FUND.

- **Renewable Energy Agency**

Following the closure of BPC Lesedi (A BPC & EDFi company), a new entity that will over see Renewable Energy is being formed

Regulation & Standards

Building Regulation – The building regulation is being reviewed and will include Energy and water management chapters.

Energy Management System- The DoE is consulting and establishing the market need for the adoption of the ISO 50001

Demand Side Management

- **Replacement of Incandescent lights with CFL(2009)- 1million bulb replaced and achieved 30MW**
- **Hotwater Load Control (on going, stage 1 load shedding)- achieves 30.4 MW**
- **Smartmeters- Installed in the residential sector and small to medium enterprises**
- **Load Curtailment (on going, stage 2 Load shedding)- targets 80,000 customers in 5 major centres can achieve 30 MW.**
- **Enforcement of Power Factor correction for large Power Users.**

Participation - stakeholders

- **The past and on going Energy Efficiency projects and initiative implemented in the country involves a number government agencies and department.**
- **However, the initiatives have been implemented without a General Framework to maximise their overall effectiveness.**

Participation - Stakeholders

- **Ministry of Infrastructure, Science and Technology**
 - Department of Building & Engineering Services
 - Bots Institute of Technology and Research
 - Botswana Innovation HUB
- **Ministry of Environment, Wildlife & Tourism**
 - Department of metrological Services
 - Department of Waste Mgt & Pollution Control
 - Botswana Tourism
- **Botswana Power Corporation**
- **Ministry of Local Government**
 - District Councils
 - Cities & Town Councils
- **Ministry of Education & skills Development**
 - University of Botswana
 - Botswana International University of Science and Technology
 - Department of Technical Services

Energy Efficiency initiatives (particularly at city level)

- *Lobatse is located on the eastern part of the country, approx 70km south of Gaborone.*
- *The township is defined on the east with international border with South Africa.*
- *It occupies an area of 40 square meters and it is completely surrounded by freehold farms of South East.*
- *2011 Population census indicates that Lobatse has a population of 29,007.*
- *Lobatse has one of the largest concentration of agro based industries.*

- It houses Botswana Meat Commission, which processes and exports beef and beef products, a leather tannery, sugar packaging industries and brewery.
- Some of the major projects earmarked for the town include the leather park project which is still at feasibility study stage.
- There is also the dairy farming project by Milk Afric which is also still at infancy stage.
- These two projects are expected to uplift the face of the town, contribute to economic growth and at the same time creating jobs for the community.

ENERGY SAVING INITIATIVES AT LOBATSE TOWN COUNCIL

- In 2010, the institution moved from using Incandescent lamps to Compact Fluorescent lamps(CFL). This was BPC initiative to move from the incandescent to CFL which consume less energy consumption.
- This year (2015), the LTC has moved to Light Emitting Diode (LED) technology and has installed demos in one circuit on street lights.
- Plans to install new LED street lights on new road network are on going.
- Plan to replace all electronic ballast fluorescent fitting with new LED fittings are ongoing inorder to reduce consumption.

ONCOMING PROJECTS ON ENERGY EFFICIENCY

- *Leather Park Project- Bio-Gas will be harvested from waste water from the facility.*
- *Dairy Farming Project by Milk Afric-will generate its own electricity from Bio-Gas*
- *Waste Segregation at source by the Local Authority.*

These projects are still are infancy stage but are expected to reduce energy consumption through Bio gas Production Plants.

THANK YOU !!!!!!!!!!!