



Energy Efficiency (EE) Practices

Kigali ,Rwanda

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

Current EE strategies and Policies (National level)

1. Energy Policy

Energy efficiency and conservation: use efficient technologies to make the best use of available energy supplies and reduce environmental impacts

2. Electricity regulation

- ❖ ***Promote energy efficiency and conservation measures***
- ❖ ***Promote sustainable provision of quality and safe services***

3. The Electricity Development Strategy

Emphasize energy efficiency measures such as reduction of technical and commercial losses on the national grid, distribution of energy efficient lamps (CFL's) and the establishment of a Solar Water Heater subsidy scheme in order to decrease electricity costs and save energy (potential to save around 50 MW per year)

Participation - Stakeholders

- ❖ **Ministry of Infrastructure (MININFRA)**
- ❖ **City of Kigali**
- ❖ **Rwanda Energy Group (REG):**
 - **Energy Development Corporation Ltd (EDCL)**
 - **Energy Utility Corporation Ltd (EUCL)**
- ❖ **Rwanda Utility Regulatory Authority (RURA)**
- ❖ **Rwanda Environmental Management Authority (REMA)**
- ❖ **Rwanda Standard Board (RSB)**
- ❖ **Private Sector**

REDUCING DEMAND: ELECTRICAL ENERGY EFFICIENCY

- **Solar water heaters to be installed in all Hotels and major residential houses to reduce power consumption**
- **Use of Solar Photo Voltaic off grid solutions to increase access to power**
- **Promoting the use of Liquefied Petrol Gas**
- **Use of Biogas and cooking stoves to save environment**
- **Replacing HPSLs with LEDs to reduce the power consumption on street lights- 40% saving.**
- **Promote and distribute saving bulbs (Compact Fluorescent Lamps-CFLs) –Approx. 50% saving**
- **CFLs annual saving is estimated at 65.5GWh equivalent to USD14.362Million by the electricity consumers, and reducing electricity demand of 44MW .**

Energy Efficiency initiatives (particularly at city level)

- **Installing 67km LED street lighting has helped in saving of 1.65 GWh per year (less energy utilization)**
- **Installing solar water heaters (Kigali city only installed 1,665 SWH) to suppress electricity use has improved the customers' welfare (saving of 7.8 MWh/year)**
- **Promoting use of CFLs used as tools to develop the culture of using energy saving lamps**

Examples

In City of Kigali, street lights are of type 150w ,250w and 400w with total of 7066 poles which are all maintained and operated by the City of Kigali

***Consumption: 443.7 KWh /month
Replacing the HPSL street lighting will help reducing the energy consumption by 40% and hence the budget.***



Biogas Digesters for rural-urban households (600 households).



Solar Power Plant of 8.5 MW

Conclusion & Challenges

- Using energy efficiency is very interesting investment and high economical decision
- Lack of expertise in developing the CDM Project Design Document;
- Capacity building in Carbon projects development and climate finance
- Green Growth secondary Cities