

# **Addressing urban indoor air pollution in Uganda**

By

Michael Ahimbisibwe  
Ministry of Energy and Mineral Development

# Introduction

- Population of Uganda grown from 16.7 million in 1991 to an estimated 27.7 million by 2007
- Only 9.2% of the population lived in the 20 largest urban centres by 2002
- Up to 43% of households in Uganda have incomes not exceeding US\$ 100 per month

# Introduction

- The “poor” spend 10% of their disposable incomes on energy, the “very poor” spend 14% and the “extremely poor” spend 22%

# Urban

- Urban areas in Uganda are defined by legislation. That is, only those areas gazetted by Government as Town Councils and Municipalities are defined as urban.
- Many centers of trade such as fishing landing sites, trading centers, camps for Internally Displaced Persons are not considered urban
- The energy access challenges are urban

# Biomass use

- Biomass fuels meet more than 90% of the Uganda's energy needs. The urban poor depend upon biomass fuels for their basic needs for cooking, water and space heating using inefficient devices
- This is applicable for both domestic and industrial levels

# Indoor air pollution

- The most direct health impact of household energy use among the poor who depend almost entirely on burning biomass fuels in simple cooking devices in inadequately ventilated spaces



# Policy overview

- Power Sector Reform and Privatization Strategy of 1999
- Electrify Act (1999)
- The Energy Policy for Uganda (2002)
- Renewable Energy Policy (2007)
- The Uganda Forestry Policy (2001) –  
cross cutting

# Target for women and children

- Women are in charge of cooking
- Preparation food takes a lot of wood fuel due to inefficient method and technologies
- Young children are usually carried on their mother's back or kept close to the warm hearth
- As a result young children spend many hours breathing indoor smoke during their first days of life when their developing air passages are more susceptible to hazardous pollutants

# Types of fuels in urban areas

- Electricity
- LPG
- Charcoal
- Firewood
- Biogas
- Solar

# Health effects of fuels used in urban areas

- Small particles, carbon monoxide, nitrogen dioxide, formaldehyde, and some carcinogens like benzene
- Acute respiratory infections in children and chronic diseases in adults

# Measuring the impacts of pollution

- Poverty is a barrier in the transition to modern fuels
- Loss of time and opportunities for economic development
- Poverty and drudgery
- Indoor air pollution responsible for 1.6 million deaths worldwide per year equal to one death every 20 seconds (WHO)

# Programmes in place to improve urban indoor air pollution

- Alternative energy technologies
- Legislation
- Tax incentives for imported technologies
- Extensive awareness
  - Energy efficiency week
  - Free distribution of energy saving bulbs

# Barriers to controlling pollution

- Inadequate information on RETs
- Inadequate Technical and Institutional Capacity
- High upfront costs on RETs
- Inadequate financing mechanisms
- Inadequate local manufacturing capacity of RETs
- Inefficiency in utilizing biomass
- Resistance to use human waste for biogas
- Social barriers (community union, smoke for pests)



# The way forward

- Introducing improved stoves
- Cleaner fuels
- Improving the living environment (better ventilation)
- Improving user behavior
- Involvement of the local communities
- Strengthen inter sector linkages
- Improve macro-economic environment
- Capacity building