BIOENERGY: STRATEGIES AND POLICY IMPLEMENTATION IN KENYA

By

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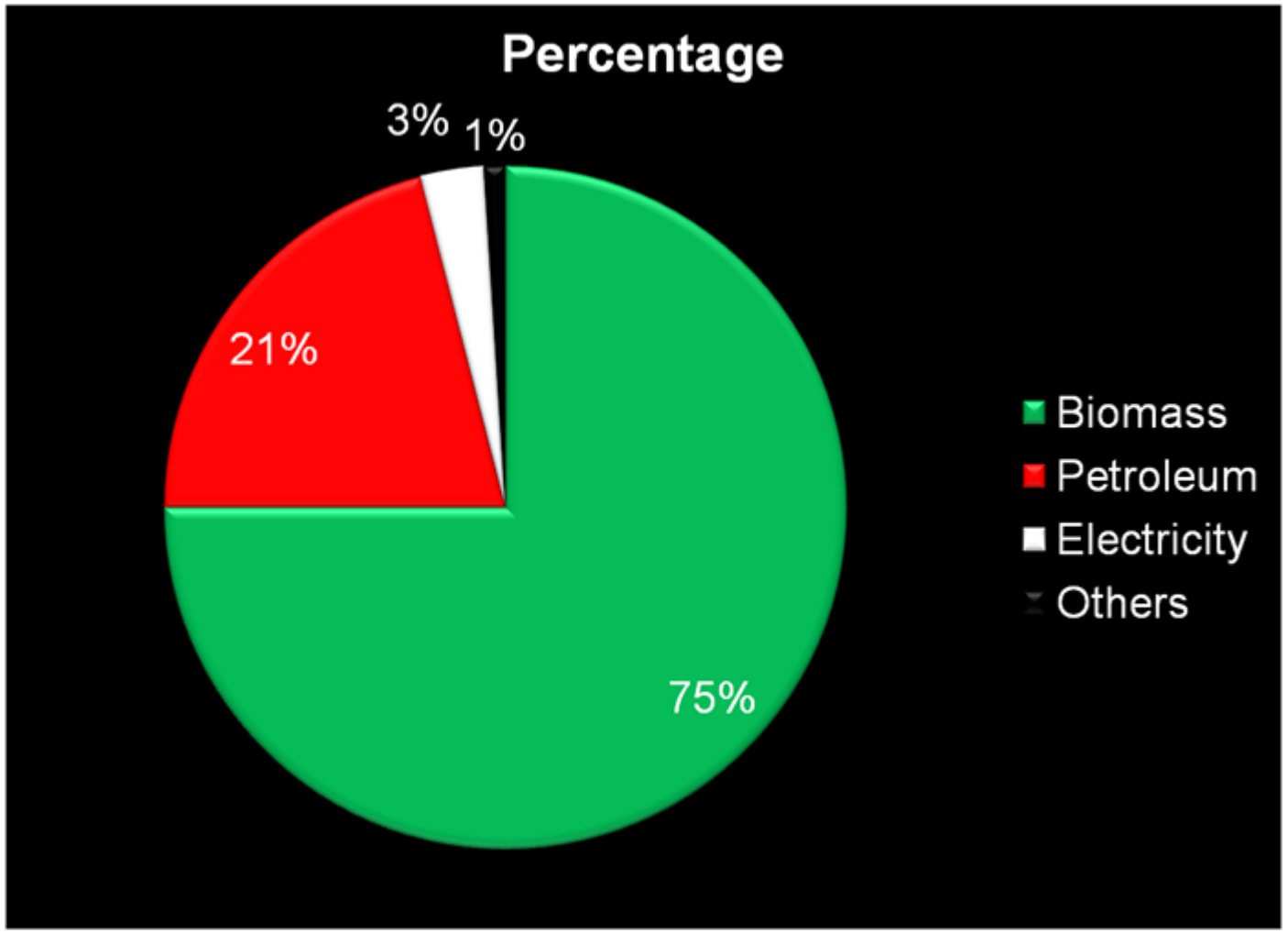
Kenya: Statistics

- Location:
  - Latitudes 5o 4’ north and 4o4’ south
  - Longitudes 33o50’ and 41o45’ east
- Population:- 28.4 m (1999 census)
- Area:- 582,650 Km2 (80% of this ASAL)
- About 70% Population live on 12% of total area

ISSUES ON BIOENERGY

- Deforestation:- 92% of population use biomass energy (charcoal & firewood)
- Very limited use / experience of biodiesel in the country
- Bioethanol:- 1983 introduced,1993 abandoned due to unsustainable pricing
- Biogas:- Low penetration of technology about 30% of digesters in disuse.
- Municipal / Industrial waste:- Not fully utilized

Kenya: Energy Consumption



Kenya: Policy Framework

- Energy policy in Kenya
  - Contained in Sessional paper no. 4 of 2004
  - It focuses on all forms of energy including bioenergy
  - Formulation started in 2001 and involved participation of many stakeholders
  - Has abroad objective of providing adequate, quality, sustainable, cost-effective and affordable energy services for socio-economic development

Bioenergy policy objective

- To ensure sufficient bioenergy supplies to meet demand on sustained basis while minimizing environmental impacts associated with usage.
  - Formulate national strategies
  - Support and development
  - Promote private sector particpation
  - Increase rate of adoption of efficient stoves
  - Use of fast growing trees for energy production

Fiscal Incentives

- Provide tax incentives to producers of renewable energy technologies and related accessories to promote their widespread use
- 10 year tax holiday for power plants using renewable energy including biomass
- Allow duty free importation of renewable energy hardware to promote widespread usage
- Provide fiscal incentives to financial institutions to provide credit facilities to consumers and entrepreneurs.

Initiatives of Policy Implementation

- Development of national strategies
  - Biodiesel strategy
  - Bioethanol strategy
- Outreach for promoting technology
  - Energy Centres
- Cogeneration
- Woodfuel
- Biogas

Biodiesel Strategy

- National Biofuels Committee set up in 2006 to coordinate stakeholders.
- Committee first focused on developing biodiesel strategy (2008-2012)
- Stakeholders: Line Ministries, Research institutions, Academia, NGO's, Private organisations.
- Crop of choice; *Jatropha curcas*
- The strategy also encourages research on other crops such as castor and croton

Biodiesel Strategy: Purpose

1. Fast track development of the biodiesel energy resource in Kenya.
2. Increase security of energy supply by reducing vulnerability resulting from dependence on imported fossil fuels.
3. Achieve a blending ratio of B5 by 2012 and B10 by 2020

Biodiesel Strategy: Purpose (Cont')

4. Diversify rural energy sources by supplementing / substituting kerosene with biodiesel.
5. To contribute to poverty alleviation through diversification of income sources.
6. An effort to address global warming through substitution of petroleum fuels.

Targeted sectors for blending and substitution

- Retail pump outlets & road transport (50.3% of the total consumption
- Industrial, commercial, & others (13.1%)
- Power generation (12.8%)
- Kerosene for lighting and cooking

Kenya Biodiesel Association

- Coordinate stake-holders: Feedstock producers, processor, marketers, distributors etc.)
- Establishment of buying centres
- Price setting of feedstock
- Assist small scale farmers to acquire technology and services
- Provide an avenue for lobbying
- Monitoring and evaluation

Bioethanol Strategy: Purpose

- Fast track development of the bioethanol energy resource; achieve blending ratio of E-10 (bioethanol with petrol) by December 31st 2010
- Increase security of energy supply by reducing reliance on imported fuels.;
- Diversify the sugar industry base and strengthen competitiveness of sugar factories;
- Minimise pollutant effects of woodfuel and kerosene by substituting these fuels with bioethanol;

Capacity

- Inadequate capacity to produce molasses to meet national demand
- Current production at ACFC & Spectre adequate to implement E10 mandate
- E10 Mandate requires 135,000 litres per day

Capacity (Cont)

- Great potential for expansion of production from existing distilleries and the sugar factories
- Some of the factories have done feasibility studies but are unable to begin because of financial constraints
- Privatization of the government owned sugar factories has already been initiated

Cogeneration

- All the sugar factories are cogenerating but only one (Mumias) feeds power into the national grid. 2 MW
- There are plans to increase this by 26 MW
- Studies show increasing cogeneration capacity in the other sugar factories would require external funding
- A feed-in-tariff for biomass cogeneration is available to encourage investment

Woodfuel

- A draft woodfuel development strategy and Action plan developed
- Meant to lead to development of wood fuel in the country.
- Aims to license charcoal production to encourage sustainable commercial production
- Draft charcoal regulations have been circulated to stakeholders for comments

ENERGY CENTRES

- Serve as outreach centres to promote renewable energy technologies (mainly biomass)
- 10 centres are already establish and there are plans to increase the number to 21
- The centres train farmers and provide technical advice such as construction of biogas digesters.

Thank you for listening