**International Conference**
**'Bioenergy for Sustainable Development in Africa'**
**Lessons learnt from COMPETE**

***24 – 25 November 2009***
***Brussels, Belgium***

# Bioenergy Policy Implementation in Ghana

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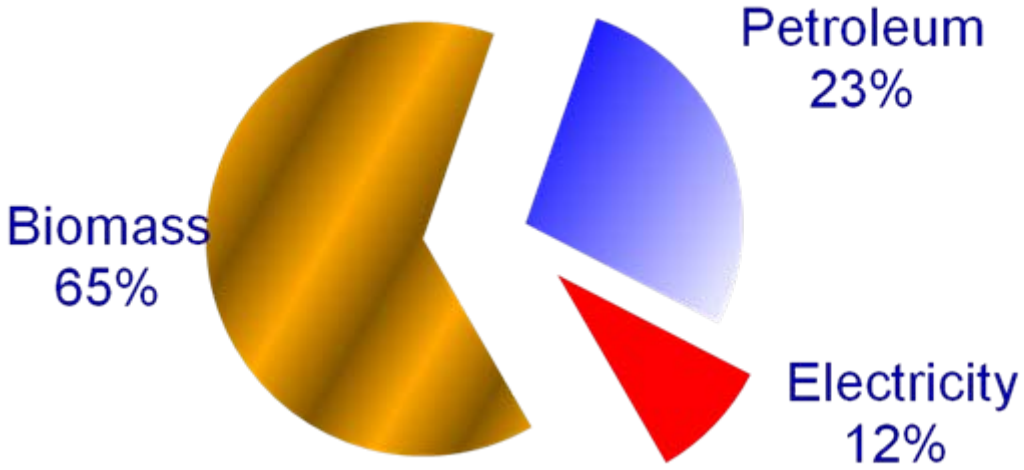
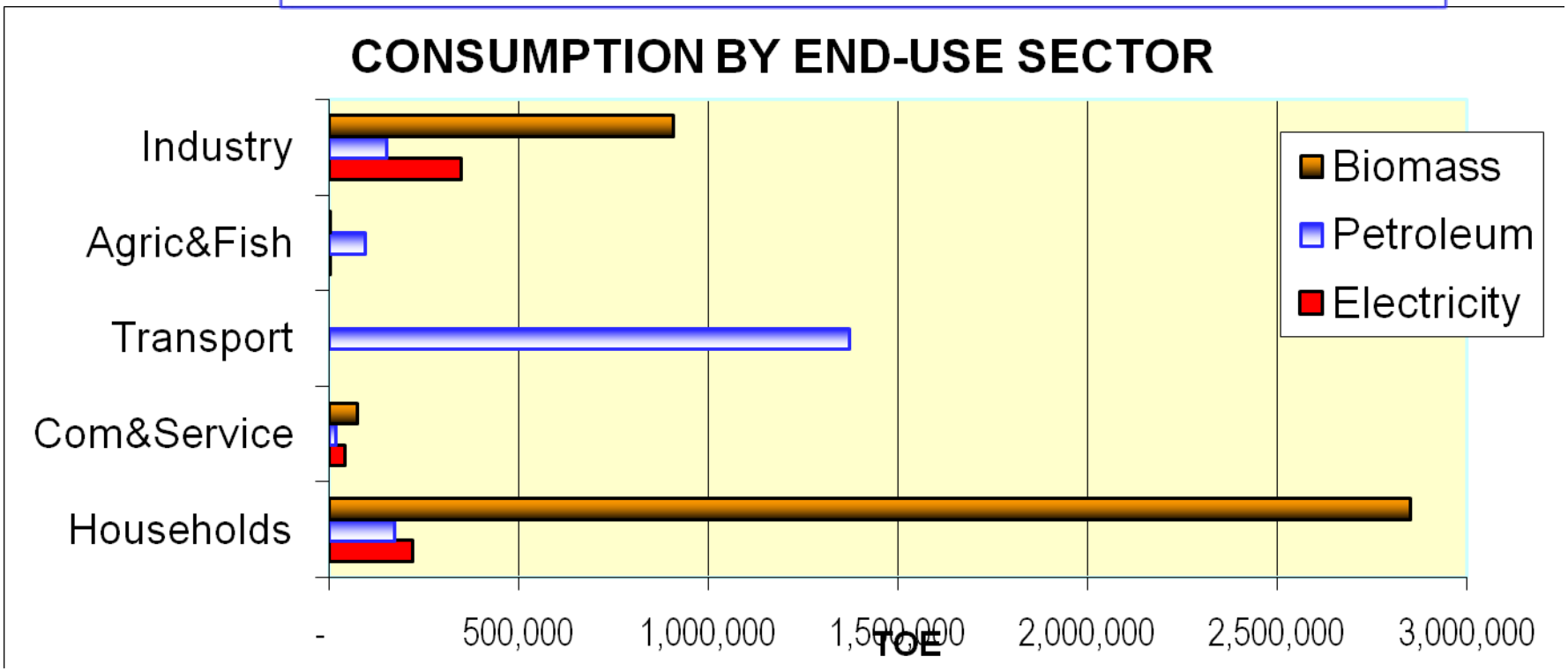
# Total Energy Supply in Ghana 2007 – 9.9MTOE



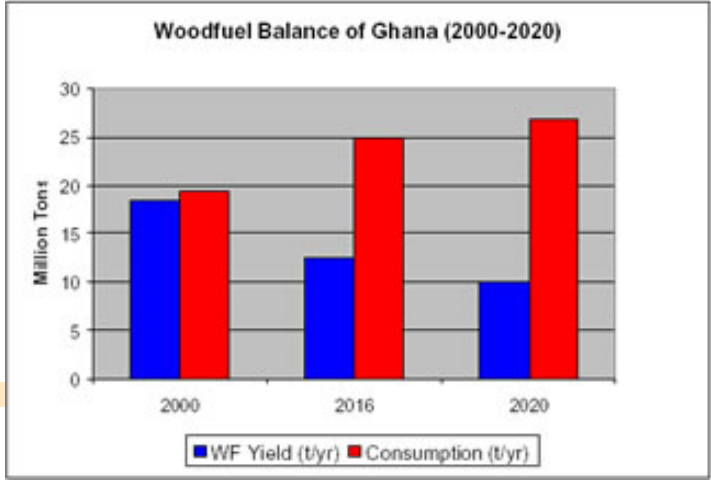
# Bio-energy

- Key energy resources in Ghana and of the future (Cheap and can be sustainable).
- Wide range of resources including
  - natural forests,
  - short-rotation plantations,
  - wood processing,
  - agricultural residues and
  - Municipal and industrial organic waste.
  - energy crops,

# Bio-energy Policy Issues in Ghana

- Over dependence on woodfuel for cooking and heating.
- Health and environmental implications of inefficient conversion devices
- How to reverse decline of the woodfuel resource base in Ghana and shift to alternatives sources

# Bio-energy Policy Issues in Ghana




- Growing imbalance in woodfuel consumption and yield.
- Weak enforcement of policy and regulatory framework for the production, transport and export of woodfuel
- No favourable regulatory and fiscal regime to attract investment in bio-energy for electricity or transport fuel
- Inadequate R&D in Bio-energy
- No specific regulatory mechanism for the production, local use and export of biofuel.

# Overall Policy Directions – Bioenergy


- Regeneration of woody biomass resources
- Promotion and use of efficient biomass utilization technologies
- Promotion of alternate fuels such as LPG… as substitute for firewood and charcoal
- Support Research and development
- Creation of Legislation and favorable regulatory framework to attract investment (Renewable Energy Law)
- NB: The objective of the energy policy direction is to ensure increased access to sustainable energy services in Ghana - modern bio-energy technologies.

# Some Experiences with Modern Bio-energy Applications

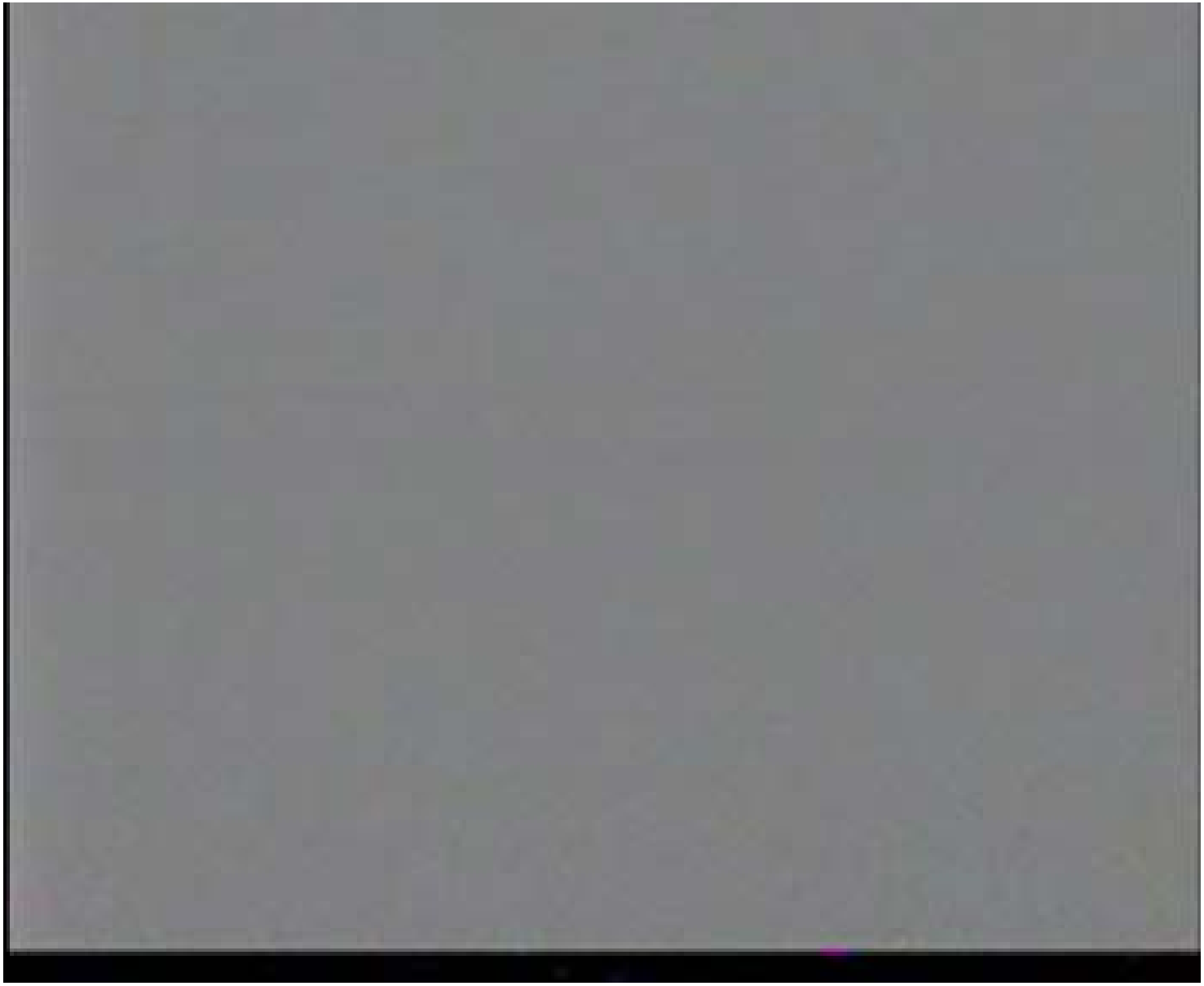
- Improved cookstoves (firewood & Charcoal)
- Improved charcoal production technologies
- Briquetting
- Co-generation (sawmill / palm residues )
- Biogas (municipal/farm waste, animal dung)
- Gasification (feasibility study/research)
- Biodiesel – Jathropha, oil palm, soya bean oil, sunflower oil,  etc.

# Liquid Bio-fuel

- Liquid Bio-fuel is quite a recent phenomenon in Ghana
- Interest has been on bio-diesel from the Jathropha,
- Several initiatives by private investors and NGO including UNDP-Ghana
- Gov of Ghana facilitated testing of refined products in the lab. and made available a pick-up to test fuel performance.

# Rational for Gov. Interest

- Potential for large scale production to create jobs and provide cheaper local alternative petroleum fuel
- Very little skill will be required to optimise production
  - Local skills for feedstock cultivation and processing is traditionally known
- Other components such as KOH required as catalyst  can be produced locally from cocoa pod (waste).
- Put large uncultivated land including degraded lands to productive use to increase biofuel feedstock and food production
- Save foreign exchange on petroleum imports.



# Bio-fuel Challenges

- Production of the vegetable oil (jathropha, palm oil, soya, coconut etc) is high (US$1.2 -1.6/litre)
- Transformation to biodiesel requires additional 40-50% of cost (US$2.3/litre).
- The current price at the pump of US$0.8/litre made bio-diesel uncompetitive for local use.
- On going bio-fuel investments are therefore focusing on the export market rather than local market.
- Unfortunately, no framework is in place to regulate bioenergy production and sale for export as it is done in the case of cocoa, cotton, rubber etc.

# Current developments on bio-fuel

- Influx of foreign investors from Europe, Asia and South America are undertaking large scale cultivation of bioenergy mainly jatropha over the past 2-5 yrs.
- Traditional authorities released land with the promise of job creation, increased food production and access to social amenities.
- Unfortunately the expectations regarding the wonder plant Jatropha as portrayed on the web is different from the reality on the ground.
- Consequently the promise of job creation, establishing social amenities like schools and hospitals are yet to see the light of day.

# Why Jatropha?

- Why focus mainly on only Jatropha feedstock in Africa?
  - Why not oil-palm, groundnut, coconut, cassava, cane-sugar or other high energy crops with economic values common in Africa?
  - What happens if the incentive for biofuel supply to the industrialized countries are withdrawn?
- Biofuel production should be based on plants with additional commercial values other than fuel to ensure economic diversity and sustainability.

# Conclusion

- Bioenergy - woodfuel will continue to be the dominant energy resource in the foreseeable future in Ghana due to its availability and low cost.
- Other Bio-energy resources besides woodfuel also have the potential to deliver modern energy services (electricity and transport fuel) for local consumption and export.
- The challenge however is whether to encourage investment in bioenergy for export when the country itself lacks access to food and sustainable energy services?

# YES

**if the appropriate regulatory policies are in place and enforced,**

- Bioenergy industry can be developed sustainably to
  - contribute to increased food production
  - Create worth and alleviate poverty
  - Contribute to increasing access to energy services in Ghana

# Conclusion

- What we need is a pragmatic approach that will bring real benefits to Ghana and developed countries.
- The EU has the skills and expertise  to assist Ghana and Africa in general to
  - develop and enforce appropriate policies and regulatory frameworks  to ensure sustainability of the industry.
  - add value to the bioenergy products before being exported out of the country to create local jobs
  - R&D, Technology transfer and local capacity building.
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# Your support is necessary to take up the Challenge of bio-energy exploitation in Africa


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