Sustainable Biofuel powered Buses and Trucks – clean and local fuels for Sub-Saharan Africa

Anthony King
Scania South Africa – Alternative Fuels Manager

GBEP Bioenergy Week: Maputo, Mozambique 5 - 9 May 2014
Agenda

- Scania
- Drivers for Sustainable HD Transport
- Solutions – Biofuels
  - Biodiesel, Bioethanol, Biogas
- Good example
  - South African approach
- Questions and Discussion
Many Drivers for Sustainable Transport

- Climate Change
- Peak Oil
- Local Energy Security
- Diesel shortage
- Air Quality
- Congestion
- Increase of transportation
- Policies
- Green image
- Urbanization
- …
Drivers for Sustainable Transport
Climate Change – The Elephant in the Room

- Rapid environmental change is underway
- Current policies are far from enough
- Transport sector is one of the fastest growing emitters

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The double challenge
How to replace oil and reduce CO₂ simultaneously?

Transport Sector to 96% dependent on oil
Asian/African transport challenges

- Rapid Urbanization
- High % of GDP used for oil/diesel imports
- How to achieve sustainable mobility of people and goods in fast-growing countries and cities?

Source: United Nations, Department of Economic and Social Affairs The 2010 Revision. (Updated: 15 April 2011)
There are no magic solutions
Green light for biofuels
There is CO$_2$ and then there is CO$_2$

Biofuels

Fossil fuels
Sustainable urban transport
- Here and now!

There is no single solution for achieving sustainable transport
Products for the 3 major Biofuels

**Bioethanol**
World’s No. 1 biofuel
Diesel engine & efficiency
Average 71 %
CO₂ reduction
*Buses, coaches, waste collectors, distribution trucks.*

**Biodiesel**
Low blends to B100
Diesel engine
Average 38 %
CO₂ reduction (EU)
*All types of applications, including long-haulage and coaches.*

**Biogas**
Mixes with CNG
Otto engine
Average 73 %
CO₂ reduction (EU)
*City/Intercity buses, waste collectors, distribution trucks.*
Scania’s commitment!

Infrastructure supply
Global land use

No competition with valuable land or threats to biodiversity
The CO$_2$ challenge – Solutions are available
Scania Sub-Saharan Africa network
South African example – Go and See!

- Demo ethanol city bus
- Proven operation/service 2010-12
- Vehicle and service/maintenance offered at same price as diesel (Euro 5)!

- “Local fuel – local jobs”
  - 1 ethanol bus/truck:
    - 2 new jobs in fuel production
    - Replaces ~50 000 litres of diesel
    - Reduces 78% of CO₂

- **South Africa imports over 60% of its oil**

- From demo to fleet operation
Thank you!

Any Questions?