Is there a need for a biogas strategy

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Renewable Energy Initiatives

5 March 2015
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RENEWABLE ENERGY POLICY COMMITMENTS

• As stated in the 2003 White Paper on Renewable Energy, renewable energy resources are harnessed from naturally occurring non-depletable sources of energy such as solar, wind, biomass, hydropower, etc. to produce electricity, gaseous and liquid fuels, heat or a combination of these.

• Biomass includes fuelwood, plants, agriculture and forestry residues plus organic components found in municipal and industrial wastes.

• Through this White Paper government committed to strategically develop renewable energy resources in future in a systematic way.

• The 2010-2030 Integrated Resource Plan, promulgated in May 2011 increased the modest 10 year target of about 1 600MW by 2013 to 17,800MW by 2030.

• The IRP 2010-2030 is being implemented in two ways – small scale RE IPP procurement (1-5MW) and large scale RE IPP.

• None for vehicular transport at this stage.
RENEWABLE ENERGY KEY DRIVERS AND BENEFITS

Key drivers to renewable energy deployment are:
1. Energy Security
2. Economic Growth
3. Climate Change

Concomitant Benefits therefore include:
• Expanding energy access especially to the poor and marginalized communities;
• Economic opportunities;
• Job opportunities which vary from unskilled construction work to skilled professionals (policy, R&D, marketing, design, O&M);
• Improved air quality;
• Reduction in GHG Emissions which moderates climate change;
• Enhanced energy security, diversified energy mix and sustainable development.
ADDITIONAL BIOGAS BENEFITS

• Encouraging responsible waste disposal
• Nutrient rich by-product used as organic fertilizer instead of chemicals.
• In rural applications, switching from fuelwood and paraffin can have major health and safety benefits due to reduced indoor air pollution, risk of fires etc.

Typical feedstock
• **Sewerage**: domestic, municipal, schools, hotels, etc.
• **Food waste**: domestic & industrial/commercial, incl. fats and oils
• **Manure**: pig (high content due to protein diet), cattle - dairy or feedlot, chicken, etc.
• **Agricultural**: vegetables, fruit, maize, sugar cane, sugar beet etc.
• **Commercial**: abattoirs, cheese factories, breweries, wine estates, processing plants, fruit & veg packaging plants, etc.
Biogas is a renewable energy source, its benefits are clear, so why is there a need for a strategy?
ENHANCING FRAMEWORK CONDITIONS FOR BIOGAS

- Targeted interventions are required in order to develop a sustainable market for biogas projects for South Africa.
- For this technology, size matters – 100kW and above instead of 1MW entry point may be desirable for utility scale plants.
- A strategy can provide a framework for systematically developing the market.
- The National Biogas Platform has already started working on some of the critical elements that would need to be addressed in the strategy – i.e. information, finance and permitting processes.
- Targets and timelines will be identified by the strategy document.
What are the key elements for developing a sustainable biogas market in South Africa?

**Government**
- Resource assessments
  - Feedstock options and potential
  - Feedstock supply chains
- Policy framework
  - Promotion strategy and expansion targets
  - Incentive schemes (e.g. direct sale / wheeling, bonus, tender ...)
  - Standards and regulations
  - Streamlined licensing

**Industry**
- Project development
  - Planers
  - Project developers
  - Financing institutions
  - Viable business models / business cases
- Construction
  - Manufacturers and suppliers
  - Construction companies
  - Supervision / commissioning
- Operation and maintenance
  - Biogas laboratories
  - Biogas utilisation options (electricity, gas / fuel, co-gen)
  - Use and marketing of sludge as fertilizer
  - Operational staff

**Research and training**
- Feedstock optimisation
- Biogas process optimisation
- Biogas utilisation

**Awareness creation**
- Planners of waste water treatment plants
- Agro business
CONCLUSION

• A biogas strategy will enhance efforts to promote biogas therefore contributing to a balanced mix of renewable energy supply
• Both direct and indirect benefits of biogas should be highlighted and taken into account so as to guide supporting mechanisms that are desirable for this sector relative to its contribution.
  – The ability of biogas plants to deliver power to the grid at peak times
  – The potential for job creation, particularly in rural areas
  – The possible contribution of biogas to the promotion of local manufacturing
  – The role that biogas can play in agricultural waste management
“A better functioning energy sector is vital to ensuring that the citizens of sub-Saharan Africa can fulfil their aspirations”

Maria van der Hoeven, IEA Executive Director.

THANK YOU
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