

Expert workshop for the *How2Guide for Bioenergy*
Regional focus: Southern Africa. Thematic focus: Waste-to-energy and Biogas
29-30 April 2014, Durban, South Africa

*Hosted by the South African Sugar Association at
Kwa-Shukela, 170 Flanders Drive, Mount Edgecombe KwaZulu-Natal*

This workshop is the first in a series that will provide inputs to the How2Guide for Bioenergy – a manual for policy and decision makers for the development and implementation of bioenergy technology roadmaps that are tailored to national frameworks, resources and capacities.

The event is organized by the International Energy Agency (IEA) in the framework of the International Low-Carbon Energy Technology Platform, in collaboration with the Food and Agriculture Organization of the United Nations' (FAO) Bioenergy and Food Security Projects (BEFS). The workshop is organized with the support of the South African National Energy Development Institute (SANEDI), the Renewable Energy and Energy Efficiency Partnership (REEEP), the South African Sugar Association (SASA), the Netherlands Enterprise Agency (RVO) and the Swedish International Development Cooperation Agency (SIDA). This workshop focuses on the Southern African region and in particular on the use of waste-to-energy and biogas.

Contacts

IEA Technology Platform: Simone Landolina and Marie-Laetitia Gourdin at marie-laetitia.gourdin@iea.org

FAO: Irini Maltoglou at Irini.Maltoglou@fao.org

SANEDI / REEEP: Jason Schaffler and Nicole Algio at jason.schaffler@reeep.org and NicoleA@sanedi.org.za

AGENDA

Day 1: 29 April 2014

Time	Session content and speakers
9:30-9:45	Opening session <i>In this session, the Host will provide welcome remarks followed by short statements by How2Guide project partners.</i> <ul style="list-style-type: none"> Welcome remarks by Thembakazi Mali, SANEDI With the participation of workshop partners: REEEP and SASA
9:45-11:00	Session 1: Introduction to the <i>How2Guide for Bioenergy</i> and global bioenergy technology potential <ul style="list-style-type: none"> Presentation by Simone Landolina and Adam Brown, IEA: <ul style="list-style-type: none"> Presentation of the IEA Technology Platform, <i>How2Guide</i> concept, the structure of the <i>How2Guide for Bioenergy</i> and workshop objectives The IEA Global Technology Roadmaps on Bioenergy for Heat and Power, and on Biofuels, including overview of <i>IEA Bioenergy Implementing Agreement</i> (by Kees Kwant). Presentation by Irini Maltsoğlu, FAO: <ul style="list-style-type: none"> FAO Bioenergy Toolkit and resources for resource assessment: overview <p>Followed by short Q&A (10 minutes)</p>
11:00- 11:20	<i>Coffee break</i>
11:20-12:45	Session 2: Assessing bioenergy potential in Southern Africa <i>Moderator and introductive presentation: Gerry Ostheimer, Novozymes / SE4ALL</i> <ul style="list-style-type: none"> Medhat El-Helepi, UNECA: Policy Framework and Guidelines for the Sustainable Development of Bioenergy in Africa Thembakazi Mali, SANEDI: Overview of biomass resources, policies and technologies in South Africa Rajabu Ngoma Mtunze, Ministry of Agriculture Food Security and Cooperatives, Tanzania: Bioenergy policies and strategies in Tanzania <p>Followed by Q&A (15 minutes)</p>
12:45-14:00	<i>Lunch</i>
14:00-15:30	Session 3: Energy valorization of biomass waste

	<p><i>Moderator: Jason Schäffler, Renewable Energy and Energy Efficiency Partnership</i></p> <ul style="list-style-type: none"> • Mark Gordon, Department of Environment, South Africa The potential of valorisation of biomass waste - solid/organic; and sewage (examples of pilot projects) • John Parkin, City Council of Durban: case study of Durban as national hub for use of biomass waste: Bisasar Landfill • Kees Kwant, Bioenergy Implementing Agreement: key recommendations from the workshop on waste-to-energy held in South Africa in May 2013 • Gracia Munganga, GreenCape: Lessons from integrated development of waste economy in the Western Cape <p>Open discussion with all participants</p>
15:30-15:45	<i>Coffee break</i>
15:45-17:00	<p>Session 4: Sustainable production and use of biogas</p> <p><i>Moderator: Jean-Francois Dallemand, European Commission – Joint Research Centre</i></p> <ul style="list-style-type: none"> • Ana Kojakovic, FAO: Application of BEFS RA tools: Potential for rural electrification through gasification of crop residues in Malawi • Prema Govender and Sofja Giljova, GIZ: the “Waste to Energy” flagship programme and the “South African Biogas Platform” • Mark Tiepelt, South Africa Biogas Association: Barriers and opportunities experienced in the biogas industry in South Africa and possible solutions <p>Open discussion with all participants</p>

Day 2: 30 April 2014

Time	Session content and speakers
9:30-11:00	<p>Session 5: Bioenergy roadmap development – part I: methodology, tools, stakeholders</p> <p><i>This session will provide the foundation for roadmap development and it is structured as an interactive workshop with all participants.</i></p> <p><i>Co-Chair: IEA / FAO</i></p> <ul style="list-style-type: none"> • Dave Long, PAMSA: keynote presentation on biomass resources and business case for biomass cogeneration in Southern Africa • Derek Naidoo, Green Grid Energy (Pty) Ltd: the use of rapidly growing bamboo and its processing for biomass energy generation and use in socio-economic development

	Open discussion around key phases of bioenergy roadmap process, including consideration of indicators, resources, and roles of public and private sector.
11:00- 11:20	<i>Coffee break</i>
11:20-12:30	<p>Session 6: Bioenergy roadmap development – part II: regional drivers, barriers and solutions</p> <p><i>This session will consider the categorisation of bioenergy project drivers as well as a range of considerations and barriers to bioenergy deployment. Examples will be presented to illustrate how problems can be foreseen and addressed during the planning and deployment stage.</i></p> <p><i>Co-Chair: IEA /FAO</i></p> <ul style="list-style-type: none"> • Kees Kwant, RVO: Key lessons for bioenergy technology deployment, experiences with pilot projects in Southern Africa • Benedito Diogo Lopes Chembeze, Deputy National Director of Electrical Energy, Ministry of Energy Mozambique: Overview of bioenergy resources, technologies and policies in Mozambique • Rethabile Melamu, Bio2Watt: Biomass chains for biogas projects from residues and wastes in South Africa <p>Open discussion with audience around regional drivers, barriers and solutions</p>
12:30-12:45	Closing remarks by Kevin Nassiep, SANEDI
12:45-14:00	<i>Lunch</i>
	<p>Site visit organised by the eThekweni Municipality at Bisasar Landfill</p> <ul style="list-style-type: none"> • Cleansing and Solid Waste Unit: Durban Landfill-Gas to Electricity (Bisasar Landfill) <p><i>Transportation from the workshop venue and back will be organised with the support of the eThekweni Municipality.</i></p> <p>Bisasar Landfill consists of six 1MW and one 0,5MW engines. This is the main component of the Durban Landfill Gas to Electricity Project situated on one of the largest landfill sites in South Africa. Bisasar takes in 3500 tons of refuse per day peaking at 5000 tons. The project currently has 77 vertical wells and 77 horizontal wells. There is capacity for one an additional engine. The site is operated by eThekweni Municipality's Durban Solid Waste staff falling under the Plant and Disposal Branch. A Monitoring Committee consisting of Local, Provincial and State Government officials, I & APs and members of the public meet on a regular basis. The objective of this committee is to ensure that the standards set out in the Permit are adhered to and that the site is run to acceptable norms and standards. The remaining air space as at June 2002 was estimated at 10.5 million cubic meters. Estimated remaining life span, taking into account normal growth, is 15 years.</p>