

# Promoting organic waste-to-energy and other low-carbon technologies in small and medium and micro-scale enterprises (SMMEs): Accelerating biogas market development

Presentation to the 3<sup>rd</sup> National Biogas Conference  
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Nokwazi Moyo, UNIDO



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# Component 1: Capacity building and Technology Support

Summary of activities planned for Year 1:

1. Detailed assessment and characterization of waste streams from agro-processing SMMEs
2. Identification and contracting of Biogas support centre to be strengthened
3. Development of Biogas guidelines and decision support tools for integrated Biogas systems in agro-processing SMMEs
4. Training of Biogas professionals and technicians
5. Planning and execution of the first of a series of 10 targeted workshops for Biogas market players on Integrated Biogas Systems



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# Component 1: Capacity building and Technology Support

Detailed assessment and characterization of waste streams from agro-processing SMMEs:

- The ARC was invited to submit a proposal to perform this activity in conjunction with “Valorization of Digestate” under *Component 2*;
- ARC had been identified during the Project Preparation Phase and therefore was invited under “waiver”
- Contracting is being finalized
- Duration of the contract is 36 months (was supposed to start July 2017)



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# Component 1: Capacity building and Technology Support *(cont.)*

Identification and contracting of Biogas support centre to be strengthened

**SABIA Administrator/Energy Expert** was procured and assumed duty in July  
His responsibilities and conditions of service are:

- Set up office for SABIA;
- Formulate operational systems;
- Finalise the SABIA Business Plan;
- Implement a membership drive/campaign;
- Coordinate SABIA calendar events;
- Coordinate WtE Project activities in which SABIA is implicated;
- Organise an accessible repository for biogas knowledge products;
- Attend to SABIA membership queries;
- Attend and represent SABIA in forums as may be required by SABIA Chairman from time to time;
- Man the office at least 2 days per week; and
- Current contract is for 12 months (position to be supported for 3 years).



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# Component 1: Capacity building and Technology Support (cont.)

Development of Biogas guidelines and decision support tools for integrated Biogas systems in agro-processing SMMEs:

- Procurement was done on “Open and competitive tender”;
- Fachverband Biogas Company (Germany) was contracted to do the whole activity;
- Duration of the contract is 10 months;
- The work kicked off on August 3, 2017;
- Two drafts of Biogas Guidebook have already been circulated amongst the core “partners” group;
- First workshop was held yesterday; and
- Second and third workshops are planned for February 2018 and before end of June 2018 targeting national and regional audiences, respectively.



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# Component 1: Capacity building and Technology Support (cont.)

Training of Technicians and Professional in the construction and maintenance of Domestic Biogas Units:

- University of Venda (UNIVEN) was identified during Project Preparation Phase and then procured under “Waiver”;
- UNIVEN was contracted in April 2017 to provide the services in 5 Limpopo Districts;
- A baseline visit was held in January 2017 and Kick-off meeting in September 2017;
- Duration of contract is April 2017 to February 2020
- Selection of training sites where biogas units will be constructed has started (Workshop of Community Leaders was held)
- Selection of technician trainees is due to start



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# Component 2: Biogas Market Development and Regulatory Framework

Summary of contracted projects/service providers for Year 1:

1. Development of the two Biogas Quality Standards for Integrated Biogas Plants
2. Development of Guidelines and Regulations on Valorization of Digestate (covered under Component 1 *ARC contract*)
3. Investigation of the Biogas licensing process with a view of streamlining it (deferred to Year 2)
  - Could be combined with relevant Demonstration Projects (Component 3); and
  - Investment Strategy (Component 4) needs to verify whether Biogas Licensing bureaucracy is a significantly constraining factor.
4. Development of Regulatory Framework on Access to the Grid by Small and Medium Biogas Projects (also deferred to Year 2 for similar reasons to 3)



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# Component 2: Biogas Market Development and Regulatory Framework

Development of Biogas Industry Quality and Safety Standards, and training materials

- Procurement was done on “Open competitive tender”
- GCS (Water & Environmental Consultants) was contracted to support the development of two Biogas Industry Standards, i.e., SANS 1753-1 (<0.5GJ) and SANS 1753-2 (>0.5GJ)
- A kick off meeting was held with GCS in August 2017
- Contract duration 31 months (August 2017 to February 2020)
- Key deliverables are:
  - The two standards drafted to SABS specifications;
  - Training material for the two standards developed SETA accreditation level;
  - Training of trainers on the two standards conducted for a critical mass of trainers



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# Project Component 3: Technology Demonstration

## Summary of Contracted Projects

Project Developer	Description	Location	Remarks
GCX Africa	Winelands Pork Abattoir Pyrolysis (500kW)	Bellville, Western Cape	Converted from AD to pyrolysis
CAE	Uilenkraal Dairy wheeling power from CHP AD Plant (300-500kW)	Darling, Western Cape (Bela Bela site dropped)	Legal matter with DST on a different project
GCX Africa	Elgin Fruit Juices biogas upgrading and conversion of vehicle fleet to dual fuel (500kW)	Grabouw, Western Cape	Seasonal peaks of feedstock supply
Ibert	Cavalier Abattoir CHP AD Plant (500kW)	Cullinan, Gauteng	Expansion phase
Renen	Sunshine Seedling Services co-digestion Induced Blanket Reactor (IBR) (110kW)	Howick, KZN	Phased expansion to 1.5MW on 10 locations



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# Project Component 4: Scaling up

Intended to start in Year 1

1. Formulation of Investment Strategy for Integrated Biogas Businesses
2. Technical assistance for development of 4 more investment project (to achieve at least 6 MW)

Intended to start in Year 2

3. Portfolio of at least 25 investment projects compiled and disseminated
4. Technical support to design financial support
5. National biogas investment forum organised regularly



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# Thank You



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