

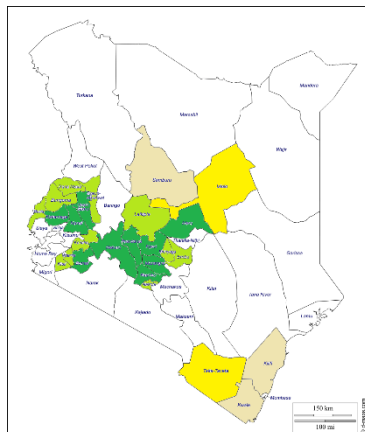
Biodigestion Solution Design for Counties

Funded by the Dutch Ministry of Foreign Affairs (DGIS), the Danish International Development Agency (DANIDA) and the European Union (EU), the African Biodigester Component (ABC) in Kenya aims at facilitating a shift of the biodigester market from its pioneering to the expansion phase where more than 20,000 small (0 to 50 m³) and 250 medium (50 to 500 m³) size biodigesters will be installed. The component is implemented by a consortium between GIZ and SNV (the Netherlands Development Organisation) in cooperation with Africa Bioenergy Programs Limited (ABPL - ex-Kenya Biogas Program).



The On-Demand Technical Assistance Pool

The on-demand technical assistance (TA) facility was created with the intention of serving as an overarching tool to support capacity-building initiatives for business networks, and national and county governments. The TA facility comprises a pool of specialists deployed on demand to provide targeted and personalized support to biodigester industry associations and ABC Counties designated as high-potential, spill over, and affirmative-action counties.



Capacity building Plus counties in dark green and yellow. Light colors are for spill-over counties

Accessing the Facility

The facility is open to the ABC project partners and counties. They are required to sign a memorandum of understanding with SNV. Based on their needs, partners can request TA through the submission of Terms of Reference (ToRs). The ToRs will be reviewed, followed by a possible feedback loop and approval.

The Biodigestion Solution Design Facility

The proposed facility is different from the Technical Assistance pool proposed by SNV. The main objectives of the facility are:

- (i) define the available feedstock for anaerobic biodigestion from infrastructures managed by county authorities
- (ii) define the potential clients for the biogas and bioslurry as well as their co-products within the social institutions managed by the county authorities
- (iii) support the solution design
- (iv) support the county authorities in the procurement of the proposed solution.

In no means would GIZ finance the recommended solution. However, the county authorities can indirectly benefit from the two instruments proposed by ABC for the medium-scale market segment:

- the revolving fund for biodigester enterprises
- the super sales agent incentive facility

Feedstock sources from county-managed facilities:

42,850 Educational institutions

9,215 Health facilities

1,125 Food markets

219 Slaughterhouses

136 Wastewater treatment plants (WWTP)

118 Prisons



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Expected Benefits of the facility to the counties

- Separation of solid waste, aggregation and collection of organic waste to be used as biogas production feedstock.
- Number of tons of solid waste diverted from landfills to biogas and biofertilizers production.
- Amount of CO₂ equivalent of Greenhouse Gas emissions mitigated
- Number of households, restaurants and other clients using clean energy from biogas.
- Number of farmers using biofertilizers leading to better food security and soil restoration.



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Nature of Technical Assistance to be offered

Technical Assessment

- In depth assessment of the availability of feedstock composition in order to estimate biogas production potential parameters such as biogas production potential and the required biogas capacity needed.
- Propose the appropriate biogas options and modelling the operation requirements of the system based on different system sizes.

Economic assessment

- Detailed Resources requirement and costings (Financial, human, machinery, land etc).
- Market Analysis to determine the revenue opportunities linked to the sale of biogas and fertiliser and define the suitable business model.
- Financial Feasibility (anticipated cash flow, risks and return on investment).
- Product development, branding and marketing requirements including an analysis of the best delivery method for the gas and outlets for the fertilizer.



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Social Environmental Assessment

- Emissions and environmental baseline.
- Map-out and quantify potential impacts on the full range of beneficiaries.

How to apply?

County authorities must assess if they have sufficient budget to invest in the infrastructure prior to apply. GIZ will not financially support the biogas infrastructure. GIZ offers 5 days on-site and virtual support for procuring the solution. If interested, the energy director should contact abckkenya@giz.de to benefit from the facility.

Published by:

African Biogas Component in Kenya
Nairobi, Kenya
E abckkenya@giz.de
I <https://abc.kenyabiogas.com/>

Contact:

E abckkenya@giz.de
I <https://endev.info/>
I <https://english.rvo.nl/subsidies-programmes/african-biogas-component-abc>

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