



## Kenya Biogas Program: Reputation Building Action Plan

---

January 2018

## KBP Reputation Building Action Plan

### Introduction

Repair, maintenance and training are a major part of ensuring the reputation of performance of the technology and the program is upheld, Having reputable and responsible BCE's and Companies is another key component that assures positive reputation. Reputation is one of the core areas that require urgent focus, drawing from the lessons from ABPP phase I of implementation experience. Reputation outlook is as a result of three dimensions,

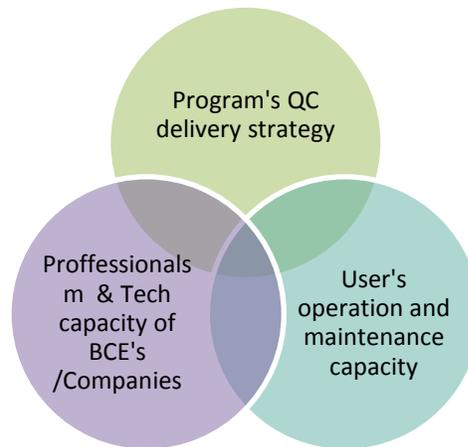


Figure 1

- i) The quality of program delivery in ensuring quality control, which includes the management of BCE's and companies, training of the BCE's, improving monitoring and information sharing upwards and downwards and most importantly ensuring quick response to functionality challenges escalated to the program directly by the clients or through the customer service centre.
- ii) Professionalism and capacity of BCE's and Companies, this encompasses all activities of the entrepreneurs and companies from their marketing messaging (overselling), pricing (over or under pricing), construction/installation (technical competence) , maintenance (training users, after sale service, repairs).
- iii) Operation of the plant by clients, this involves feeding (quality and quantity of the feed, ratio of waste to water), physical protection of the plant from damage (pipe breakages, dome breakages, mishandling of water traps etc...).

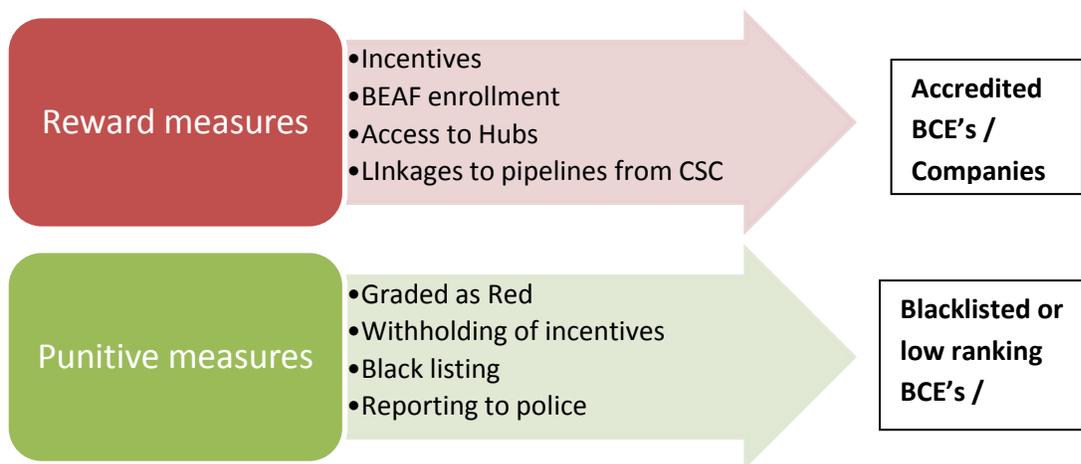
The following are the proposed interventions that the Kenya Biogas Program has put in place to ensure that all the risks associated with the three dimensions are eliminated or minimized moving forward.

### Program Delivery on Functionality

The program has put in place various measures to ensure that management of BCE's and companies, to deliver quality service to clients, is effective and efficient. The program applies both a reward and punitive approach in dealing with the performance and behavior of the BCE's.

Our reward structure includes awarding incentives, enrollment to the biogas enterprise acceleration facility (BEAF) program, and linkages to marketing hubs, sharing of pipelines generated from the CSC, awarding repair contracts and offering training on new technologies in the market. With this support structure by the program, most BCE's are determined and motivated to improve on their service delivery in compliance with the agreed code of ethics.

On the other hand, the program deals punitively with uncooperative and rogue BCE's and /or companies. Some of the actions we take include, black listing of the BCE / company, issue the notice of the black list to all our network of Hubs and stakeholders and in the extreme cases, we lodge a formal complaint to the police especially on cases bordering fraud and extortion. The quality manager is responsible for the grading of all the companies based on their performance and reputation in order to qualify those that the program will work with for every programming year.



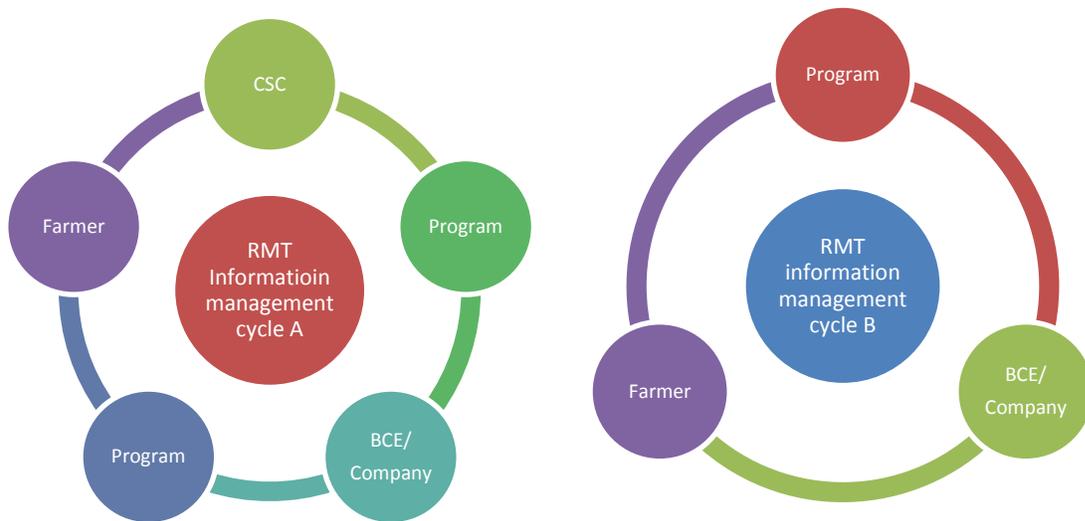
**Figure 2: Reward and punitive measures**

Another critical aspect of program delivery in management of reputation is communication and information management. Our primary sources of information are two,

- i) From the customer service centre (CSC), and
- ii) From the client support officer's desk.

The CSC through the program's M&E officer gives critical information that is based on reported plants by BCE's, and triangulation with the clients. The CSC gives the program a picture of the status of every reported plant from the client's view, which could be; functional, non-functional, abandoned, non-existing, complete or incomplete. With this information, the program is able to coordinate response to issues that have been flagged.

KBP has a clearly documented unflagging protocol under execution, this involve contracting quality service providers who assess any damage reported and advised the program on the action to be taken. The client support officer can also directly reach out to BCE's to discuss the status of their plants, at the same time receives calls from both BCE's and clients on queries. All these are organized and documented in our complaints register, with which the officer users to follow up actions both from the program and the BCE's where applicable. The complaints register is updated on a daily basis as and when complaints are logged.



**Figure 3: Information management cycle**

**Professionalism and Capacity of BCE's**

The standard tool that the program uses to evaluate the professionalism and capacity of the BCE's is our grading criterion which is heavily informed by the CSC reports and the complaints register. This encompasses interrogation of BCE's performance against specific indicators that are in line with the program's code of ethics and service charter. These include; functionality rate of their constructed/installed units, performance in delivery of after sales service, response to repair and maintenance queries, pricing of the units, production numbers per annum, and general adherence to the signed up code of ethics.

The program under the leadership of the QM does capacity development of the BCE's working with the program; these include refresher trainings on construction, introduction to new technologies and practical training on both. The BCE's are also taken through business capacity development, the top performing BCE's have been enrolled in the BEAF coaching program and are being empowered with skills to run their enterprises professionally and sustainably.

## **Operation & Maintenance by Clients**

The performance of a well-constructed or installed system lies squarely on operation and maintenance by the client. To ensure the clients benefit optimally from the plants, it is a requirement as part of service delivery for all the BCE's and companies to train the clients on all aspects of operation and maintenance e.g. feeding, using the cook stove, simple troubleshooting techniques, to management of the bio-slurry. It is also a requirement that during after sale service 1, the BCE / company gives refresher training just in case the client missed an important element.

We also have two inbound calling lines which all clients can use to reach out to the program in case of any challenge in operating their system. The first line of response as advised to the farmer should be the service provider, second calling the program directly or through the CSC. BCE's in addition to their contacts give their clients the program customer care contact line.

The program has deployed twelve field officers referred to as the biogas extension service providers (BESPs). BESPs provide first hand extension services to farmers covering all aspects of bio-digester operation and maintenance, with a core focus on ensuring the clients make the most gains from utilizing the bio-slurry. With farmers reaping maximum benefits from their bio-digester investment, they are motivated to take care of it, thus reducing the rates of non-functionality out of their negligence. With the BESP's on the ground, many cases can be arrested and dealt with in a shorter turnaround time as compared to when the program only relied on BCE's for all field related responses. To improve on this aspect, the program is creating a dedicated team, after sale service unit (ASSU) that will be on standby to respond to any after sale service delivery that is overdue or upon request of the client.

## **Objectives of the Action Plan**

- (1) Establish the responsibilities of Masons/ BCEs involved in all cases of non-existing plants and non-functional plants
- (2) Prepare a plan for RMT that involves households and BCEs.

### **1) Non-existing and non-functional plants**

The program has embarked on establishing the BCEs/Masons/Companies whose plants have been found to be either non-existing (ghost) or non-functional with the aim of seeking redress for the clients and the program where possible. From our analysis we realize that a big percentage of the BCE's in the database that reported to the program between 2009 and 2014 cannot be traced, this becomes a high cost engagement for the program if it were to take the total responsibility of repair and maintenance of the affected plants. With this, the program can already estimate the repair and maintenance burden that will require 100% cover. Plants which have been non-functional for more than a year and whose warranty period has since lapsed would pose a challenge, because the repair and maintenance burden automatically falls on the client. Under this circumstance, the program can only hope that the clients in this category will accept to meet the cost of repair and maintenance.

Likely scenarios:

- a) For non-existing plants whose BCE's can be tracked-investigate each case and contact the BCEs/companies responsible to establish the facts around each case. Thereafter institute appropriate disciplinary and/or legal action if the company/BCE is found culpable and is not cooperative, if cooperative, agree on a refund plan for the incentives received illegally.
- b) For non-functional plants whose BCE's can be tracked-upon conducting technical assessment of all the non-functional plants, we will seek to address them through the responsible BCEs where applicable.
- c) For both non-functional and non-existent plants whose BCE's cannot be tracked- the program with consultation with ABPP would make a decision on how to facilitate the repair and maintenance, and pay back to/negotiate for a pardon from the donor for incentives paid to fraudulent BCE's by the program.

## **2) Repair and Maintenance action plan 2018**

In 2017, KBP undertook a mapping exercise covering all the unreachable and ghost plants between 2009 and 2014, and all the plants reported in 2016 and 17. From the verification efforts through mapping and CSC, the overall functionality status of the entire population of plants from 2009 to date was found to be 56%.

### **Stages of repair process**

Involves three main stages namely;

- 1. Technical assessment of the non-functional plants**-this shall be done through QSPs selected based on availability and previous track record. However, we will also bolster the number through recruitment of additional team members in select regions. Their role will be to identify the problem, scope and advice for remedial measures to be taken, and provide an estimate cost for works where necessary.
- 2. Invitation to quote for repairs and contracting**-Select BCEs shall be invited to quote for repairs depending on their grading, capacity, and past records. Prioritization of the plants will be done using the 'last in first out' –LIFO principle, and preference made for strategic plants in hubs. In 2018, unflagging unknown plants and repairs will take priority. The successful bidders will be awarded the repair contracts for implementation
- 3. Verification of repairs**- this shall be carried out by QSPs (supervised by QM), and CSC. It shall serve as quality control and assurance framework of all activities carried out under repair and maintenance.

Our approach for repairs will be as detailed below;

**Table 1**

Action	Resource	Deliverable
Conduct technical assessment of all plants identified through the verification and quality control channels (CSC, QSPs, BESP, inbound calls- Client service, ASSU, Field assistants etc.)	QSPs	Assessment report detailing the actual functionality issue
Sorting and prioritization of all plants – and abandoned plants eliminated from the list	QM	Key priority will be given to strategic plants in hubs and high potential areas, most recent plants-LIFO principle
Repair categorization and clustering plants in regions, and classification of the repairs cases based on estimated cost of repair	QM	Repair clusters and cost estimates
Contracting of BCE's / working with collaborative BCE's on the repair drive	QM	Repaired plants database



**Figure 4**

KBP will partner with responsive BCEs/masons/Companies concerned to participate in the repair process through;

- Supporting the programs efforts in locating the affected clients
- providing labor and technical supervision during repair of their respective plants-this will apply to individuals who are still active in the sector and are cooperative with the program

In situations where the BCEs/masons involved are unwilling, inactive, or untraceable in biogas sector, the program shall allocate plants to other BCEs who have a proven track record to conduct repairs over the last two years. This is generally a very costly undertaking, in order to reduce the cost burden, KBP will seek to partner with willing clients to shoulder part of the repair cost (mainly purchase of materials)

The following is an analysis of the extent of non-functionality in the country over the period 2009 -2017 and detailed analysis of the cost and technical resources required to undo the damage.

Table 2

PLANT STATUS	2009	2010	2011	2012	2013	2014	2015	2016	2017	Grand Total	Overall functionality
Abandoned	0	21	36	62	78	91	50	26	0	364	2%
Functional	3	341	1312	2015	2536	1095	1094	826	980	10202	56%
No plant	0	129	60	83	404	201	162	92	0	1131	6%
Non Functional	0	187	686	752	910	297	161	104	6	3103	17%
Unknown	0	152	258	572	837	761	590	384	20	3574	19%
<b>Grand Total</b>	<b>3</b>	<b>830</b>	<b>2352</b>	<b>3484</b>	<b>4765</b>	<b>2445</b>	<b>2057</b>	<b>1432</b>	<b>1006</b>	<b>18374</b>	<b>100%</b>

Functionality by year is as illustrated below;

Table 3

PLANT STATUS	2009	2010	2011	2012	2013	2014	2015	2016	2017	Combined (2009-17)
Abandoned	0%	3%	2%	2%	2%	4%	2%	2%	0%	2%
Functional	100%	41%	56%	58%	53%	45%	53%	58%	97%	56%
No plant	0%	16%	3%	2%	8%	8%	8%	6%	0%	6%
Non Functional	0%	23%	29%	22%	19%	12%	8%	7%	1%	17%
Unknown	0%	18%	11%	16%	18%	31%	29%	27%	2%	19%
<b>Grand Total</b>	<b>100%</b>									

2009-100%, 2010-41%, 2011-56%, 2012-58%, 2013-53%, 2014-45%, 2015-53%, 2016-58%, 2017-97%.

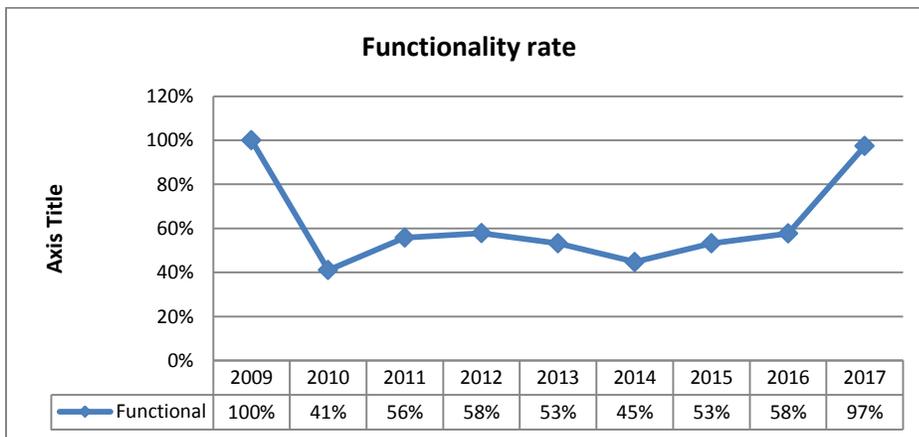


Figure 5

The findings shows a very dismal overall functionality rate which will be addressed through repairs of strategic plants.

### Budget and projected repair cost

From previous experience and observations, the distribution of the various categories of repairs is illustrated below together with the resulting weighted cost of repair per plant derived from the same;

**Table 4**

Average repair cost	Cost (not more than)	%	weighted cost
Low category	6,825.00	55%	<b>3,753.75</b>
Medium category	26,250.00	30%	<b>7,875.00</b>
High category	52,500.00	15%	<b>7,875.00</b>
		<b>100%</b>	<b>19,503.75</b>
<b>Therefore the Approx. KES 20,000.00 per plant</b>			

Assuming this holds for the entire plant population that is non-functional (3103), the repair cost is as illustrated below;

**Table 5**

AVG cost of repair (Kshs)	Avg repair cost	No. of plants	Est. repair Amount (KES)
<b>Non Functional</b>	20,000.00	3103	<b>62,060,000.00</b>
<b>Sub-Total</b>		<b>3103</b>	<b>62,060,000.00</b>
Less approved budget			<b>(5,250,000.00)</b>
<b>Est. repair budget for all plants (CSC and Mapping)</b>			<b>56,810,000.00</b>

Combining the cost estimates above together with the technical assessment fees per plant the projected cost is illustrated in the table below, complete with timelines and human resources needed,

**Table 6**

Activity / Output	Description	Detailed cost type	Resource req'd	Unit item	Unit cost(KES)	# Items	Total(KES)	Explanations	Timelines	
									Assumed Pro-rata basis	Est. period
<i>Unflag all non-functional plants flagged by CSC</i>										
<b>Technical assessment</b>	Contract QSPs to verify the functionality status of the plants and scope for repairs	Consultant Fixed fee	10 QSPs	per plant	6,000.00	3103	18,618,000.00	Consultancy charges, transport and meals	On average each QSP can verify 100 plants per month	4 months
<b>Sub-Total</b>							18,618,000.00			
<i>Rebuild reputation of the technology</i>									Assumed Pro-rata basis	Est. period
<b>Repair of non-functional plants</b>	Invite for quotes, contract qualified BCEs for repairs	Consultant Fixed fee	30 BCEs	per plant	20,000.00	3103	62,060,000.00	Materials and labour costs including technical fees	On average each BCE can repair 5 plants per month	22 months
<b>Sub-Total</b>						3103	62,060,000.00			
<b>Total Costs</b>	<b>Grand Total</b>						<b>80,678,000.00</b>			

*NB: These figures remain only indicative since the actual costs can only be determined after assessment*

Below is an excerpt of the planned repairs, timelines, and cost estimates for 2018;

**Table 7**

Activity / Output	Description	Detailed cost type	Unit item	Unit cost(KES)	# Items	Total(KES)	Explanations	Timelines		
								1st Quarter	2nd Quarter	3rd Quarter
<b>Rebuild reputation of the technology</b>										
<b>Undertake repairs of 140</b>	High Category (repair estimate at not more 500EUR)	Consultant-Fixed fee	15%	52,500.00	21	1,102,500.00	21 strategic plants under high category from the established hubs to be repaired @KES52,500 per plant	4	7	7
	Medium Category (repair estimate at not more 250EUR)	Consultant-Fixed fee	30%	26,250.00	42	1,102,500.00	42 strategic plants under high category from the established hubs to be repaired @KES26,250 per plant	7	13	13
	Low Category (repair estimate at not more 65EUR)	Consultant-Fixed fee	55%	6,825.00	77	525,525.00	77 strategic plants under high category from the established hubs to be repaired @KES6,825 per plant	14	25	25
<b>Sub-Total</b>					<b>140</b>	<b>2,730,525.00</b>		<b>25</b>	<b>45</b>	<b>45</b>
<b>Unflag all non-functional plants flagged by CSC</b>										
<b>Technical assessment</b>	Contract QSPs to verify the functionality status of the plants and scope for repairs	Consultant-Fixed fee	per plant	5,000.00	300	1,500,000.00	Consultancy charges	100	100	100
	Logistics per QSP	Consultant-Fixed fee	per plant	1,000.00	300	300,000.00	Transport and meals per plant			
<b>Sub-Total</b>						<b>1,800,000.00</b>				
<b>Total Costs</b>	<b>Grand Total</b>					<b>4,530,525.00</b>				