

SMALL-SCALE PoA CDM VALIDATION REPORT

SimGas IP BV

VALIDATION OF THE PROGRAM OF ACTIVITIES:

SimGas Biogas Programme of Activities

AENOR REFERENCE: 2011/103/CDM/86

VERSION: 4

VALIDATION REPORT

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Validation Report:	AENOR Reference n°:		Version of this report:		Date:	
	2011/103/CDM/86		04		27/02/2013	
SSC- PoA-DD:	Title:		GSC publication date:		Comments received:	
	SimGas Biogas Programme of Activities		24/12/2011		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	
Parties involved:	Host Party		Other involved Parties:			
	The republic of Kenya		The Netherlands			
Project Participant(s):	In host Parties:		In other involved Parties:			
	SimGas IP BV		SimGas IP BV			
Size of the PoA:	<input checked="" type="checkbox"/> Small scale <input type="checkbox"/> Large scale					
Applied methodologies:	Title:		Code:		N° version	
	Switch from non-renewable biomass for thermal applications by the user		AMS-I.E		4	
	Methane recovery in agricultural activities at household/small farm level		AMS-III R		2	
	Biogas/biomass thermal applications for households/small users		AMS-I.I		3	
Emission reductions (ER):		GSC PoA-DD:		Final PoA-DD:		
<input checked="" type="checkbox"/> Annual average of the ER (tCO₂e) <input type="checkbox"/> Total ER (tCO₂e)		48,856 (CPA-DD)		45,156 (CPA-DD)		
Previous versions of this document:			Version:		Date:	
			1		23/09/2012	
			2		05/10/2012	
			3		21/12/2012	
Report prepared by:	Climate Change Unit. AENOR:					

* The comments are detailed in Section 5 of this Validation Report

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Abbreviations

AENOR	Spanish Association for Standardization and Certification
AMS-I.E	Switch from non-renewable biomass for thermal applications by the user.
AMS-III.R	Methane recovery in agricultural activities at household/small farm level.
AMS-I.I	Biogas/biomass thermal applications for households/small users.
CAR	Corrective action request
CL	Clarification
CDM	Clean Development Mechanism
CDM SSC-CPA-DD	CDM Programme Activity Design Document
CDM SSC-PoA-DD	Small Scale CDM Programme Of Activities Design Document
CER	Certified emission reductions
CME	Coordinating and Managing Entity
DNA	Designated national authority
EB	Executive Board of the CDM of the Kyoto Protocol
EIA	Environmental Impact Assessment
GHG	Greenhouse Gases
FAR	Forward Action Request
GSC	Global stakeholder consultation process
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring plan
MWh	Megawatt hour
NGO	Non-Governmental Organization
PP	Project Participant
tC	Carbon tonne

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SMEs	Small and Medium Enterprises
TJ	Terajoule
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table 1: Abbreviations

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1. INTRODUCTION

1.1. Objective

This validation concerns a small scale CDM Programme of Activities (hereinafter PoA) implemented by "*SimGas IP BV.*" in Kenya, to reduce emissions of CO₂ by means of installing biogas systems with stoves in households, small and medium dairy farms with agricultural and livestock practices, that typically use non-renewable biomass (NRB) and fossil fuels as their main source of energy for cooking and lighting.

SimGas IP BV has commissioned AENOR to validate this PoA. The objective of the validation process is to have an independent third party assessment of the proposed Programme of Activities (PoA) and the CDM Programme Activity (CPA) template with generic information applicable to all CPAs under that PoA and the associated CPA 1: SimGas Biogas Programme of Activities, Kenya (CPA KE1) against the applicable CDM requirements. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country issues and criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is considered essential in providing quality assurance for the project.

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed to in the Bonn Agreement and the Marrakech Accords.

1.2. Scope

The scope of the validation is to assess all aspects of GHG reduction involved in the project, including the project design, the baseline, the methane emissions, and the procedures proposed for monitoring the emission reductions in the future.

The following documents were reviewed as part of the scope of the activity:

- CDM SSC-PoA-DD /1-2/, including baseline study and monitoring plan
- SimGas Biogas Programme of Activities, Kenya (CPA KE1)/3/
- CDM SSC-generic-CPA-DD /4/
- Approved Methodology: AMS I.E version 4 /5/
- Approved Methodology: AMS III.R version 2 /6/
- Approved Methodology: AMS III.D version 18 /7/
- Approved Methodology: AMS I.I version 3 /8/
- Decision 3/CMP.1 /9/

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- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities. Version 02.1 /10/
- Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities. Version 03. /19/
- Decision 3/CMP.1 and relevant decisions and guidelines from the EB /11/
- Guidelines For Demonstrating Additionality of Microscale Project Activities" version 04 /12/
- CDM Validation and Verification Manual version 01.2 /13/
- Letter of Approval from the DNA of Kenya/14/
- Letter of Approval from the DNA of The Netherlands /15/
- Associated documentation (environmental requirements, etc)

The validation scope is defined as an independent and objective review of the PoA-DD, SimGas Biogas Programme of Activities, Kenya (CPA KE1) and generic CPA-DD, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the specific instruction for Validation, Verification and Certification of Clean Development Mechanism (CDM) Project Activities (IE-DTC-039) /16/, has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA-DD.

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2. METHODOLOGY

The project assessment aims at being a risk-based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of designated and applicant entities, which aims to harmonize the approach and quality of all such assessments.

The validation of the programme began in December 2011 and was concluded in October 2012. The validation was performed in the manner of an audit, where, first, a desk review of the PoA-DD, SimGas Biogas Programme of Activities, Kenya (CPA KE1) CPA-DD and generic CPA-DD was undertaken against the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit and key stakeholders interviews in Kenya.

In order to ensure transparency, two validation protocols were customized for the PoA and the CPAs, according to Specific Instruction IE/DTC/039. The protocols show, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria.

The sequence of the validation is given in the table below:

Topic	Date
PoA-DD for global stakeholder consultation process	24/12/2011
On-site visit	23/01/2012 – 26/03/2012
Validation Protocol - Version 01.	21/02/2012
Final Validation Report	21/12/2012

Table 2: Sequence of the main validation activities

2.1 Appointment of team members and technical reviewers

The list of involved personnel and the qualification status are summarized in the table below:

Name	Position in the team
Luis Robles	Chief Validator
Jose Antonio Gesto	Validator
M ^a Carmen Gonzalez Galán	Technical Reviewer
Rafael Millán	Technical Expert

Table 3: List of the personnel involved

Appointment of certificates are available in Annex 2.

Technical areas (TA) mentioned above correspond to the following:

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);
TA 1.2	Energy generation from renewable energy sources.
TA 2.1	Electricity distribution;
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4. 1	Cement sector (COMPLEX);
TA 4.2	Aluminium (COMPLEX);
TA 4.3	Iron and steel (COMPLEX);
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX).
TA 6.1	Construction.
TA 7.1	Transport.
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below;

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TA code	Technical area
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 9.1	Metal production.
TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below;
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 11.1	Chemical process industries (COMPLEX);
TA 11.2	GHG capture and destruction.
TA 12.1	Chemical process industries (COMPLEX).
TA 13.1	Waste handling and disposal;
TA 13.2	Animal waste management.
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management.

Table 4: List of technical areas

2.2. Document review

The POA-DD, the SimGas Biogas Programme of Activities, Kenya (CPA KE1) CPA-DD and the generic CPA-DD submitted by the PPs were reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design, baseline and financial analysis were also made available before and during the on-site visit in Kenya.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, the consultants revised the initial project design documents submitted and developed the final PoA-DD and CPA-DD.

The reviewed documents used during the validation process are listed in section 8 of this report.

2.3. Follow-up actions

The AENOR validation team composed by Luis Robles and Jose Antonio Gesto conducted interviews with project developers and main stakeholders in Kenya to confirm selected information and to resolve issues identified in the document review.

On 23/01/2012 and 26/01/2012, AENOR's validation team performed interviews and physical site inspections with project stakeholders to confirm relevant information, and to resolve issues identified in the document review. During the visit, representatives from the CME, in addition to relevant local stakeholders such as local authorities and local inhabitants, affected by the PoA were interviewed. Also, the AENOR team visited the Kenyan DNA representative.

Interviewed organization Person/Position	Interview topics
SimGas IP BV + Climate Focus <ul style="list-style-type: none"> • Mirik Castro • Winnie Versoi • Adrian Korthuis (Climate Focus) • Jean Mark Sika 	<ul style="list-style-type: none"> ✓ PoA presentation and design ✓ Baseline determination. ✓ Environmental Assessment. ✓ Stakeholder consultation ✓ PoA Management System ✓ CPA implementation ✓ Sampling plan ✓ Biodigesters technical characteristics & installation ✓ PoA presentation and design ✓ Baseline determination. ✓ Environmental Assessment. ✓ Stakeholder consultation ✓ PoA Management System ✓ CPA implementation
DNA of Kenya <p>a) Mrs Anne Nyatichi.</p>	<ul style="list-style-type: none"> ✓ PoA's sustainable development contribution. ✓ DNA's opinion. ✓ Environmental Assessment. ✓ Letter of Approval.

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Interviewed organization Person/Position	Interview topics
Stakeholders interviewed <ul style="list-style-type: none"> a) Kenya National Domestic Biogas Programme (KENDBIP) b) . Ephantus Gichoh c) Gakindu dairy co-operative society d) Jesse Gichini e) COT-RAD Self help group. Community Training research and Development. 	<ul style="list-style-type: none"> ✓ Pilot experiences ✓ Stakeholder consultation ✓ Opinion about the PoA

Table 5. Interview topics

2.4. Findings

As an outcome of the validation process, the team can raise different types of findings according to the CDM Validation and Verification Manual.

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met; or

Where a non-conformance arises the validation team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- b) The CDM requirements have not been met;
- c) There is a risk that emission reductions cannot be monitored or calculated.

Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

The CME and the project participants were requested to address all validation findings and ultimately provided the validation team with sufficient evidence to determine that the applicable CDM requirements have been met. The CME modified the initial PoA-DD to resolve the validation team concerns and resubmitted a final version of the PoA-DD. AENOR has prepared this report based on the final PoA-DD.

All the validation findings are summarized in section 3 below and documented in more detail in section 7 and in the validation protocol included in Annex 1.

2.5. Internal Quality Control

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review before submission to the CDM-EB. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area(s) and sectoral scope(s) of the PoA.

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3. VALIDATION FINDINGS**3.1. Approval**

The Letter of Approval from the Kenyan DNA has been provided to the validation team directly by the CME. The LoA was issued on 25/06/2012 by the DNA.

AENOR confirms that the LoA states the following:

- Kenya is a Party of the Kyoto Protocol.
- Kenya voluntarily participates in the CDM and the Programme.
- The Programme contributes to the sustainable development of Kenya.
- Authorizes SIMGAS IP BV as project participant in the Programme.
- The LoA refers to the precise proposed CDM programme of activity's title in the PoA-DD being submitted for registration.

The CME have also directly provided the validation team with the LoA from The Netherlands. The LoA was issued on 03/08/2012 by the Ministry of Infrastructure and the Environment. AENOR confirms that the LoA states the following:

- The State of the Netherlands ratified Kyoto Protocol on 31 May 2002.
- The State of the Netherlands participates voluntarily in "SimGas Biogas Programme of Activities" ("The CDM Programme of Activities")
- The State of the Netherlands, as a Party indirectly involved in the "CDM Programme of Activities" authorizes the participation of "SimGas IP BV" as project participant in the CDM Programme of Activities
- The LoA refers to the precise proposed CDM programme of activities title in the PoA-DD being submitted for registration.

AENOR confirms that the LoAs from Kenya and the Netherlands have been issued by the respective parties' designated national authorities and there is no doubt of the authenticity of the letters of approval received from the CME; hence AENOR confirms that the LoAs are in compliance with paragraphs 45-48 of the VVM v.1.2.

The validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards Kenya neither the Netherlands.

3.2. Participation

Two Parties, Kenya, the host; and The Netherlands are involved in this Programme of Activities.

- The Government of Kenya ratified the Kyoto Protocol on 13/07/1999 and has appointed a DNA.
- The Netherlands ratified the Kyoto Protocol on 31/05/2002 and has also appointed a DNA.

The Coordinating and Managing Entity of the PoA is "SimGas IP BV", which has been authorized as a Project Participant by the Kenyan DNA. During validation, PP has been modified and in the final version of the POA-DD and CPA-DD the PP and CME is SimGas IP BV.

All project participants have been listed in section A.3 of the final PoA-DD. Information regarding them is confirmed as consistent in the latest version of the PoA-DD and SimGas Biogas Programme of Activities, Kenya (CPA KE1) CPA-DD and generic CPA-DD.

AENOR confirms that no entities other than those approved as project participants are included in the final PoA-DD.

3.3. Programme Design Documents

Due to the clarifications and corrective actions requested during the validation process, the project participants made a final version of the PoA-DD dated on 01-10-2012 and the Generic CPA-DD, which include corrections or clarifications to all issues raised.

The PoA-DD and the Generic CPA-DD are in compliance with relevant form and guidance as provided by UNFCCC. The most recent version of the forms under VVM Track is used.

AENOR considers that the applicable guidelines for the completion of the PoA documents have been followed. Relevant information was provided by the Managing entity and/ or project participants in the applicable PoA sections. Completeness was assessed through the protocol included in Annex 1.

3.4. Programme description

The following description of the programme of activities as per PoA-DD, generic CPA-DD and SimGas Biogas Programme of Activities, Kenya (CPA KE1) CPA-DD could be verified during the on-site visit:

The CDM Programme of Activities, "SimGas Biogas Programme of Activities" " will promote the installation of biogas systems with stoves in households, small and medium dairy farms with agricultural and livestock practices, that typically use non-renewable biomass (NRB) and fossil fuels as their main source of energy for cooking and lighting. It will reduce greenhouse gas emissions (CO₂ and CH₄) by replacing the use of NRB (and fossil fuels) with biogas produced as a result of the anaerobic digestion of manure and organic waste SimGas IP BV will disseminate different types and sizes of biogas systems, depending on the needs and preferences of the users. It includes amongst others fixed dome biodigesters; and polypropylene bag biodigesters.

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The programme will contribute to sustainable development through the provision of a clean, renewable biogas fuel. SimGas IP BV will operate closely and in harmony with national and regional development goals targeting reduction of poverty and environmental sustainability

The technology to be used in the SimGas IP BV consists of small-scale biogas systems that receive a mixture of water and animal manure, or organic waste that is then anaerobically digested. There are two types of biogas systems that will be initially introduced by this PoA:

- Manure-fed biogas systems come in different sizes, typically varying from 2 m³ to 16 m³
- Organic waste-fed biogas systems ("urban systems")

Both have been designed to the same basic principles as above, but are used to generate biogas from manure or organic domestic waste, such as biodegradable kitchen waste. Any biodegradable kitchen waste can be continually added to the biogas digester in small pieces. It is expected that these will mainly be used by households/SMEs/communities in cities. Urban Systems are currently available in three sizes: 0.55 m³, 2 m³ and 3.5 m³

The biogas is used as cooking fuel (and may also be used for lighting) throughout the day. The build-up of gas will push out slurry through the exit pipe of the biogas system, and is a fertiliser that can either be applied directly to crops or composted with other organic material, under certain conditions.

Maintenance needs are limited since the biogas systems have no moving parts. Over time, some indigestible material will build up in the digester, limiting the reactor volume. This issue can be solved simply by scooping the indigestible material out and re-filling the biogas system with manure.

The CME of this PoA has confirmed that there is no diversion of ODA involved. The starting date of the proposed PoA is properly defined as 24/12/2011 and it is justified in section 3.6.1 of this report. The length of PoA is taken as 28 years.

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information (see section 8)
- An on-site visit to the place where the associated real case CPA is being implemented and interview with relevant stakeholder and personnel with knowledge of the project in attendance
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.

In conclusion, AENOR confirms that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM and therefore in compliance with VVM paragraphs 58-64.

3.5. Baseline methodology

The PoA-DD describes the baseline methodology, which is in conformance with the approved baseline methodologies AMS-I.E entitled "Switch from non-renewable biomass for thermal applications by the user", AMS-III.R entitled "Methane recovery in agricultural activities at household/small farm level" and AMS-I.I. Biogas/biomass thermal applications for households/small users.

According to the methodology AMS-III.R for the baseline emission calculation, the "Small-Scale Methodology III.D: Methane recovery in animal manure management systems", version 18 has been used.

This PoA applies to a valid version of three CDM Methodologies approved by the EB. Furthermore, paragraph 3 of the methodology AMS-III.R clearly identifies that this category is applicable in combination with the methodologies AMS-I.E and AMS-I.I. Therefore the combination of these methodologies is considered correct and appropriate by AENOR. By means of cross check it can be confirmed that the applied methodologies are directly derived from the methodologies section on the CDM <http://cdm.unfccc.int/index.html>.

The PoA meets all applicability conditions of both methodologies and all components referred to in them. Beyond this, the proposed PoA meets all the other possible requirements or stipulations mentioned in all sections of the selected methodologies.

Furthermore the programme of activities is not expected to result in significant emissions, related to both project and leakage, other than those listed in the methodologies. In summary it has been assessed that the PoA applies a valid version of two approved CDM methodologies and that both of them are applicable to the programme.

3.6. Applicability of the selected methodologies to the Programme of Activities

The selected baseline and monitoring methodologies used for the Programme of Activities "SimGas Biogas Programme of Activities" are:

- a) AMS-I.E version 4, Valid from 29 Apr 11 to 02 Aug 12 and Requests for registration can be submitted until 03 Apr 2013 23:59:59 GMT
- b) AMS-III.R version 02, Valid from 04 Mar 11 to 27 Sep 12 and Requests for registration can be submitted until 28 May 2013 23:59:59 GMT
- c) AMS-I.I version 3: Valid from 16 Mar 12 to 02 Aug 12 and Requests for registration can be submitted until 03 Apr 2013 23:59:59 GMT

Methodology AMS-I.E is applicable to the Programme of Activities, because:

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1. *This category comprises activities to displace the use of non-renewable biomass by introducing renewable energy technologies. Examples of these technologies include but are not limited to biogas stoves, solar cookers, passive solar homes, renewable energy based drinking water treatment technologies (e.g. sand filters followed by solar water disinfection; water boiling using renewable biomass).*

The PoA aims at implementing biogas systems at user's that so far are using non-renewable biomass for cooking.

2. *Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.*

Demonstration of the use of non-renewable biomass since 31 December 1989 will be carry out at CPA level as it is stated in eligibility criteria.

AMS-III.R is applicable to the Programme of Activities, because:

1. *This project category comprises recovery and destruction of methane from manure and wastes from agricultural activities that, in the absence of the project activity, would be decaying anaerobically emitting methane to the atmosphere. Methane emissions are prevented by:*
 - a. *Installing methane recovery and combustion systems to an existing source of methane emissions; or*
 - b. *Changing the management practice of a biogenic waste or raw material in order to achieve the controlled anaerobic digestion equipped with methane recovery and combustion system.*

In contexts where the standard manure management practices lead to methane emissions, the biogas systems implemented in the SSC-CPA will change the management practice of handling manure through diverting use to anaerobic digestion for the production of biogas. Biodigesters installed under this PoA will be fed with a combination of animal manure and water, thus changing the management practice of manure to achieve controlled anaerobic digestion. The biogas produced will be collected and combusted to generate heat for cooking purposes.

2. *The category is limited to measures at individual households or small farms (e.g. installation of a domestic biogas digester). Methane recovery systems that achieve an annual emission reduction of less than or equal to five tonnes of CO₂e per system are included in this category.*

According to eligibility criteria, this PoA is limited to individual households/SMEs/communities where the annual methane emissions are less than or equal to 5t CO₂e.

3. *This project category is only applicable in combination with AMS-I.C "Thermal energy production with or without electricity" and/or AMS-I.I "Biogas/biomass thermal applications for households/small users" and/or AMS-I.E "Switch from non-renewable biomass for thermal applications by the user"*

AMS-I.E and AMS I.I. will be applied in the SSC-CPA for all biogas systems.

4. *The project activity shall satisfy the following conditions:*
- a. *The sludge must be handled aerobically. In case of soil application of the final sludge the proper conditions and procedures that ensure that there are no methane emissions must be ensured;*
 - b. *Measures shall be used (e.g. combusted or burnt in a biogas burner for cooking needs) to ensure that all the methane collected by the recovery system is destroyed.*

The sludge of the household biogas system will be applied to agricultural land as a fertiliser. Training will be given to users to apply the sludge in a proper way ensuring aerobic handling. The biogas produced will be used to meet cooking needs, ensuring that all methane collected by the household biogas system is destroyed.

5. *Aggregated annual emission reductions of all systems included shall be less than or equal to 60 kt CO₂ equivalent.*

The avoided methane emissions of each SSC-CPA will not exceed 60 kt CO₂e as it is explain in the eligibility criterion.

AMS-I. I is applicable to the Programme of Activities, because:

1. *This category comprises activities for generation of renewable thermal energy using renewable biomass or biogas for use in residential, commercial, institutional applications (e.g. for supply to households, small farms or for use in built environment of institutions such as schools). Examples of these technologies that displace or avoid fossil fuel use include but are not limited to biogas cook stoves, biomass briquette cook stoves, small scale baking and drying systems, water heating, or space heating systems.*

The PoA aims at implementing biogas systems fed with manure and organic waste at users that so far are using LPG or kerosene for cooking. Users include households/SMEs/communities

2. *The total installed/rated thermal energy generation capacity of the project equipment is equal to or less than 45 MW thermal."*

Cumulative capacity of biogas systems per SSC-CPA will not exceed the limit of 45 MW thermal.

3. *Each unit (e.g. cook stove, heater) shall have a rated capacity equal to or less than 150 kW thermal."*

The maximum output capacity of each biogas system is 3.85 kWth, which is below the threshold

AENOR confirms the applicability of the selected methodologies to the Programme of Activities. The latest version of the PoA-DD adequately describes the different applicability conditions of both methodologies and no deviation from them has been necessary. The applicability of methodologies has been properly included in the eligibility criteria of the PoA.

The Programme of Activities is not expected to result in emissions other than those allowed by the methodologies, and there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.7. Programme boundary

The boundary (geographically and related to GHG sources / sinks) is correctly explained in section A.4.1.2 of the PoA-DD. The geographical boundary of this PoA is the geographical area of Kenya.

As per the applied methodologies, the boundary of the CPA under this PoA is defined as:

- a) AMS-I.E: "the physical, geographical site of the use of biomass or the renewable energy.
- b) AMS-III.R: the physical, geographical site of the methane recovery and combustion systems.
- c) AMS-I.I: the physical, geographical sites of the equipment producing thermal energy during the crediting period.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

In addition, all emission sources and GHGs related included and excluded from the project boundary are clearly identified and described in a complete manner in the latest version of the PoA-DD.

The validation team states that the identified boundary and the selected sources and gases are correctly justified by the project proponent in the PoA-DD, and they are in accordance with the applied methodologies.

3.8. Baseline identification

The baseline scenario for this PoA is identified in accordance with approved methodologies AMS-III.R; AMS-I.I and AMS-I.E. The CME will identify the baseline scenarios at CPA level through a baseline survey in accordance with the requirements of the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities version 03.

- a) AMS-I.E: The baseline scenario is the use of thermal energy at small farms and households that includes NRB. Without the project activity, it can be assumed that non-renewable biomass use could be displaced by fossil fuel use as well. In Kenya the dependency on fuel wood as a

source of energy is high. AMS-I.E states that the baseline scenario is, in the absence of the project activity, the use of fossil fuels meeting similar thermal energy demands.

- b) AMS-III.R: The baseline scenario is the situation where, in the absence of the project activity, organic matter is left to decay anaerobically within the project boundary and methane is emitted to the atmosphere. AMS-III.R establishes that baseline emissions are calculated (as per the option in paragraph 9 (a) and relevant formulae shown in paragraph 10 of AMS-III.D "Methane recovery in animal manure management systems") by using the amount of the waste that would decay anaerobically in the absence of the project activity, with the most recent IPCC tier 2 approach. For this calculation, information about the characteristics of the manure and of the management systems in the baseline is required. Manure characteristics include the amount of volatile solids (VS) produced by the livestock and the maximum amount of methane that can be potentially produced from that manure (B₀); this will be determined for each CPA through a survey of a sample group with a 90% confidence interval and a 10% margin of error, following the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities (version 03)
- c) AMS-I.I: The baseline scenario is the use of thermal energy at households, communities and/or SMEs that use fossil fuel as a fuel source. Without the project activity, it can be assumed that fossil fuel use will continue. AMS-I.I states that the baseline scenario is the fuel consumption of the thermal application used or that would have been used in the absence of the project activity, times an emission factor for the fossil fuel displaced.

AENOR confirms that credible alternatives to the project activity have been identified according to the applied methodologies in order to determine the most realistic baseline scenario. (VVM 1.2, paragraph 105). Therefore, the baseline determination is considered as transparent and reasonable.

3.9. Algorithms and/or formulae used to determine emission reductions

Emission reductions due to the displacement of non-renewable biomass (AMS-I.E)

In accordance with the methodology, the emission reductions are calculated as follows:

$$ER_y = B_y * f_{NRB,y} * NCV_{biomass} * EF_{projected\ fossilfuel}$$

Where:

ER_y	Emission reductions by replacing non-renewable biomass use during the year y in tCO _{2e}
B_y	Quantity of woody biomass that is substituted or displaced in tonnes
$f_{NRB,y}$	Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass using survey methods (percentage)
$NCV_{biomass}$	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for fire wood, 0.015 TJ/tonne)

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$EF_{\text{projected fossilfuel}}$ Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO₂/TJ)

In this PoA parameter B_y will be defined at CPA level an it is calculated as the product of the number of appliances multiplied by the estimate of average annual consumption of woody biomass per appliance (tonnes/year) or Calculated from the thermal energy generated in the project activity as:

$$B_y = HG_{p,y} / NCV_{\text{biomass}} * \eta_{BL}$$

Where

$HG_{p,y}$ Quantity of thermal energy generated by the new renewable energy technology in the project in year y (TJ)

η_{BL} Efficiency of the system being replaced, measured using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of system is being replaced;
A default value of 0.10 may be optionally used if the replaced system is a three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e. without a grate or a chimney; for other types of systems a default value of 0.2 may be optionally used

According to Paragraph (7) project participants shall determine the shares of renewable and non-renewable woody biomass in B_y (the quantity of woody biomass used in the absence of the project activity) the total biomass consumption using nationally approved methods (e.g. surveys or government data if available) and then determine $f_{NRB,y}$. The shares of renewable and non-renewable woody biomass in B_y will be determined at CPA level.

The fraction of NRB ($f_{NRB,y}$), is determined at CPA level according to paragraph 8 of the methodology AMS-I.E. by the following formula:

$$f_{NRB,y} = \frac{NRB}{NRB + DRB}$$

Where:

$f_{NRB,y}$ Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass using survey methods (percentage)

NRB Quantity of non-renewable biomass used in the absence of the project activity (B_y) minus the DRB component (t/yr/household)

DRB Demonstrably renewable woody biomass (t/yr/household)

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Project Emissions

No project emissions are accounted for under this methodology.

Leakage

Leakage shall be accounted in accordance with the guidance provided by AMS-IE, paragraph 10.a: "*B_y is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.*"

Emission reductions due to the avoidance of methane emissions from manure handling (AMS-III.R)**Baseline Emissions**

As it has been explained above, according to the methodology, baseline emissions are calculated (as per the option in paragraph 9 (a) and relevant formulae shown in paragraph 10 of AMS-III.D "Methane recovery in animal manure management systems")

Therefore, baseline emissions are determined as follows:

$$BE_{y,T} = GWP_{CH_4} * D_{CH_4} * UF_b * \sum_{j,LT} MCF_j * B_{0,LT} * N_{LT,y} * V_{ST} * MS_{\%BL,j}$$

Where:

$BE_{y,T}$	Baseline emissions from manure handling during the year y in tCO ₂ e
GWP_{CH_4}	Global Warming Potential of methane
D_{CH_4}	CH ₄ density (0.00067 t/m ³)
LT	Index for all types of livestock
j	Index for animal manure management system
MCF_j	Annual methane conversion factor (MCF) for the baseline manure management system j.
$B_{0,LT}$	Maximum methane producing capacity for manure produced by livestock category T in m ³ CH ₄ /kg dm
$N_{LT,y}$	Annual average number of animals of type LT in year y (numbers)
V_{ST}	Daily volatile solid excreted for livestock category T in kg/day
$MS_{\%BL,j}$	Fraction of manure handled in the baseline animal manure management system j
UF_b	Model correction factor to account for model uncertainties (0.94)

Values for the parameters, MCF_j , $B_{0,LT}$, V_{ST} , according to the methodology, are extracted from IPCC Guidelines for National Greenhouse Gas Inventories: "Chapter 10: Emissions from Livestock and Manure Management" (2006).

The Annual average number of animals of type LT in year y ($N_{LT,y}$) is determined based on the Number of days animals are alive in the farm ($N_{da,y}$) and the number of animals produced annually ($N_{p,y}$). These parameters will be monitored annually annually on a sampling basis following the "Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities" (EB 69, Annex 4) in accordance with CDM requirements.

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Project Emissions

As option 2 is chosen to calculate the baseline emissions, no project emissions need to be accounted for

Leakage

If the biodigesters introduced by the project activity are transferred from outside the boundary to the project activity, leakage is to be considered. Where biodigesters are not covered by a Type III project activity (i.e. as per methodology AMS-III.R):

- Any leakage due to change in manure management practice shall be taken into account, referring to methods provided in AMS-III.D "Methane recovery in animal manure management systems";
- Physical leakage of biogas shall be accounted for as per the methods specified under AMS-III.D "Methane recovery in animal manure management systems".

Emission reductions due to the avoidance of methane emissions from manure handling (AMS-I.I)**Baseline Emissions**

The emission reductions are calculated following 'Option 2' of the methodology, and are based on the thermal energy generated using the measured quantity of biogas. The emission reductions are calculated using the following formula

$$ER_y = \sum_k N_{k,0} * n_{k,y} * BS_{k,y} * EF * \eta_{PJ/BL} * NCV_{biogas} - LE_y$$

Where:

ER_y Emission reductions from fossil fuel use during the year y in tCO₂e

$N_{k,0}$ Number of thermal applications k commissioned

$n_{k,y}$ Proportion of $k,0$ N that remain operating in year y (fraction)

$BS_{k,y}$ The net quantity of renewable biogas consumed by the thermal application k in year y , in tonnes/year

EF Mean CO₂ emission factor, in tonnes/TJ

$\eta_{PJ/BL}$ Ratio of efficiencies of project equipment and baseline equipment

NCV_{biogas} Net calorific value of the biogas, use default value: 0.0215 GJ/m³ biogas, in TJ/tonne

As baseline emissions are calculated based on the thermal energy generated using the measured quantity of biogas ex post, $BS_{k,y}$ is estimated as the amount of thermal energy that would need to be provided to secure the same amount of output as in the baseline scenario where fossil fuel combustion and the baseline equipment are applied

Project emissions

As option 2 is chosen to calculate the baseline emissions, no project emissions need to be accounted for.

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Leakage

If the biodigesters introduced by the project activity are transferred from outside the boundary to the project activity, leakage is to be considered. Where biodigesters are not covered by a Type III project activity (i.e. as per methodology AMS-III.R):

- Any leakage due to change in manure management practice shall be taken into account, referring to methods provided in AMS-III.D "Methane recovery in animal manure management systems";
- Physical leakage of biogas shall be accounted for as per the methods specified under AMS-III.D "Methane recovery in animal manure management systems".

Emissions reductions

Taking into account all the above explanations, Emission Reductions (ER_y) will be calculated as:

$$ER_y = BE_y - PE_y - \text{Leakage}$$

Where:

ER_y	Methane emissions reductions in year y (tCO_2)
BE_y	Baseline methane emissions during the year y (tCO_2)
PE_y	Project methane emissions during the year y (tCO_2)
Leakage_y	Leakage during the year y (tCO_2)

Based on the above assessment, AENOR confirms that that:

- All assumptions and data used by the CME are listed in the PoA-DD and CPA-DD, including their references and sources;
- All documentation used by the CME as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and CPA-DD;
- All values used in the PoA-DD and CPA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD and CPA-DD.

3.10. Additionality

3.10.1. Starting date of the Programme of Activities

According to the final PoA-DD the starting date of the programme is 24/12/2011, this date is the date of global stakeholder consultation of the PoA which is deemed appropriate in accordance with the CDM glossary of terms, thus accepted by the validation team of AENOR.

3.10.2. Additionality of the Programme of Activities

The additionality of the programme has been presented in section A.4.3 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

The proposed PoA is a voluntary action by the coordinating/managing entity "SimGas IP BV". Based on the submitted documents and substantiation it is evident that this voluntary coordinated action would not be implemented in the absence of the PoA.

It has been clearly demonstrated that there is no mandatory policy or regulation in the host country enforcing the implementation of biogas facilities in rural or urban areas in Kenya, and no such regulations are foreseeable. This was confirmed based on the on-site interviews and the host country experience of the audit team.

In addition, the PoA-DD establishes in Sections A.4.2.2 (eligibility criteria) and E.5 the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of the additionality.

The following options have been chosen to demonstrate CPA additionality, taking into account the two methodologies that apply to this PoA.

1. **For Type I methodologies (in this case AMS I.E and AMS I.I)** paragraph 2 (c) of the guidelines determines that project activities up to 5 MW (or 15 MWth) that employ renewable energy technology are additional if the project activity is designed for distributed energy generation (not connected to a national or regional grid) with both conditions (a) and (b) satisfied;
 - a) Each of the independent subsystems/measures in the project activity is smaller than or equal to 1,500kW (equal to 4,500kW thermal) electrical installed capacity;
 - b) End users of the subsystems or measures are households/SMEs/communities.
2. **For Type III methodologies (in this case AMS III.R)** paragraph 4 (b) of the guidelines determines that project activities that aim to achieve emissions reductions at a scale of no more than 20 ktCO_{2e} per year are additional if:
 - a) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than 600 tCO_{2e} per year; and
 - b) End users of the subsystems or measures are households/SMEs/communities.

The additionality is justified according to paragraph 8 of the *"Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities"* (version 01.0, EB 65) and it is demonstrated at CPA level by using *"Guidelines for demonstrating additionality of microscale project activities"* (EB 68, Annex 26), thus, based on the assessment above, the PoA is assessed to be additional by the validation team of AENOR.

3.10.3. Additionality of a typical SSC-CPA

The additionality of the PoA has been presented on a CPA level. The PoA-DD specifies clearly that in order to demonstrate additionality the CPA shall fulfil the following criteria:

1. The limits of the SSC-CPA are defined as follows:
 - a) Where AMS-I.E and AMS-I.I apply, the size of the SSC-CPA is less than or equal $15 \text{ MW}_{\text{th}}$;
 - b) Where AMS-III.R applies, the size of the SSC-CPA is less than or equal to $20 \text{ ktCO}_2/\text{yr}$.Whichever CPA capacity is reached first will define the limits of the CPA.
2. Each individual household biogas system in the SSC-CPA must have a maximum thermal capacity of $4,500 \text{ kW}_{\text{th}}$.
3. Each of the independent biogas systems in the project activity achieves an estimated annual emission reduction equal to or less than $600 \text{ tCO}_2\text{e}$ per year
4. Users of the biodigester systems are households/communities/SMEs.

AENOR has validated that these criteria are clearly described in the PoA-DD, are verifiable and have been included as the eligibility criteria of the PoA according to the *"Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities"* (version 02.1.0.) Furthermore, AENOR confirms that these criteria have been defined following the *"Guidelines for demonstrating additionality of microscale project activities"* (v.04.0.0)

3.11. Monitoring Plan

3.11.1. Compliance of the monitoring plan with the approved methodology

The monitoring plan presented in the PoA-DD complies with the requirements of the applicable methodologies, AMS I.E and AMS I.I AMS III.R. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodologies and no deviations have been found.

During the validation process AENOR has verified that the parameters to be monitored, according to the applied methodologies under the proposed programme of activities, are consistent with the project description in the PoA-DD. In addition the PoA-DD clearly explains the quality control and quality assurance to apply for monitoring activities, including the metering equipment and calibration requirements.

Therefore, the applicability of these methodologies is justified in the latest version of the PoA-DD. The final PoA-DD clearly identifies the parameters to monitor in compliance with the applicable methodologies:

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Parameter	Monitoring frequency	Remarks
N Number of thermal applications commissioned	On survey	On commissioning of the biogas system the unique serial number of each digester will be recorded, and entered into an electronic database, with clear divisions between CPAs.
n_{k,y} Operational rate of the thermal applications installed	Annual Monitoring Survey	The operational rate of thermal applications will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4)
Displacement_{NRB} Confirmation on the displacement or substitution of the non-renewable woody biomass at each location.	Annual Monitoring Survey	This will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
OP_{hours} The average annual hours of operation of a system using survey methods.	Annual Monitoring Survey	All data will be recorded alongside the unique serial number of the digester installations. This will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
N_{p, y} Number of animals produced annually of type LT for the year y	Annually	This will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
WST_{generation, y} Amount of animal manure generated on the farm in year y	Annually	The number of livestock will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
HG_{p,y}	Annually	This will be monitored annually using sampling methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
WST_{fed, y} Amount of waste/animal manure fed into the system	Annually	On commissioning users will be shown how to record the quantity of manure deposited into the system. Users will be provided with a bucket and the amount of waste/animal manure fed into the system will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
BS_{k,y} net quantity of renewable biogas consumed by the thermal application <i>k</i> in year <i>y</i>	Annually	In accordance with the monitoring requirements of AMS-I.I, at least five campaigns per digester type shall be carried out in each year of the crediting period. Continuous measurement made for at least one month at a single digester is considered as a campaign

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Parameter	Monitoring frequency	Remarks
MS_{BL,j} Fraction of manure handled in the baseline animal manure management system <i>j</i>	One survey each CPA.	On commissioning of biodigester systems, users will be asked how the manure was being handled in the baseline scenario. The fraction of baseline manure management will be known using sampling methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4) in accordance with CDM requirements.
MCF_j Methane conversion factor for each manure management system <i>j</i>	-	Will not be monitored continually, but only assessed once on commissioning of the biogas system through the Baseline Survey.
Soil application	Annually	On commissioning of biodigester systems, users will be provided with training as to the proper application of sludge to soil to avoid methane emissions. The application of slurry to soil will be surveyed annually using sampling methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4) in accordance with CDM requirements.
N_{da,y} Number of days animal is alive in farm in year <i>y</i>	Annually	The number will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
N_{L T, y} Annual average animal population category LT in year <i>y</i>	Annually	This will be monitored annually using survey methods to satisfy a 90/10 precision/confidence, following the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4).
GWP_{CH₄} Global Warming Potential of methane	Updated for periodical verification process	All future emission reductions and removals shall be calculated using the global warming potentials (GWPs) adopted by the Conference of the Parties serving as the meeting of the Parties at its seventh session, in accordance with decision 4/CMP.7 and EB 69, Annex 3. This decision references the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) as the source to be used for GWPs during the second commitment period of the Kyoto Protocol.

AENOR; has verified that the monitoring plan for the PoA is in accordance with the requirements set forth in the respective methodologies. When applicable, monitoring will be carried out through a survey and the sample size will be selected following a 90% confidence interval and a 10% margin of error (90/10), according to the *Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities* (EB 69, Annex 4). As the PoA progresses and the number of CPAs increases, the sampling plan can apply to a group of CPAs as referred to in paragraph 19 of EB 69, Annex 4.

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AENOR has validated that the above mentioned sampling plan fulfill completely all the requirements of the *Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities* (EB 69, Annex 4), requirements are fulfilled as follows :

The sampling method applied will be the multi-stage sampling, where clusters consisted of geographical areas and subunits. Clusters will be selected with a probability proportionate to the size of the target population within each cluster such that larger clusters have a greater probability of selection, and smaller clusters a lower probability. This helps to ensure that sampling remains representative of the entire population.

As stated above the precision and expected variance will be established in accordance with the recommended values by UNFCCC, 90% precision and 10% expected variance.

The sample size calculation will be determined using following formula:

$$c \geq \frac{\frac{SD_B^2}{\bar{p}^2} \times \frac{M}{M-1} + \frac{1}{\bar{u}} \times \frac{SD_w^2}{\bar{p}^2} \times \frac{(\bar{N} - \bar{u})}{(\bar{N} - 1)}}{\frac{0.1^2}{1.645^2} + \frac{1}{M-1} \times \frac{SD_B^2}{\bar{p}^2}}$$

Where

- C : Number of groups that should be sampled
- M: Total number of groups in the population
- \bar{u} : Number of units to be sampled within each group
- \bar{N} : Average units per group
- SD_B^2 : Unit variance
- SD_w^2 : Average of the group variances
- \bar{p} : Overall proportion
- 1.645: Represents the 90% confidence required
- 0.1: Represents the 10% relative precision

Confidence interval=1.645, corresponding to 90% confidence interval, (90% confidence interval and a 10% margin of error (90/10).)

Population proportion, set at 0.5 for the first monitoring. The expression above for determining the sample size depends on that is problematic. The way to overcome this problem is to take the conservative approach by setting $p = 0.5$. This approach is conservative. That way, the desired margin of

error regardless of what the value of P is. This is a "worst case scenario" approach, and therefore the most conservative. This value will give a sample size sufficiently large to guarantee an accurate prediction, given the confidence interval and the error of estimate. For future sampling events, the historic overall proportion from previous sampling results will be used, which is deemed correct.

Error margin; 10% (90% confidence interval and a 10% margin of error (90/10).)

Due to the variable input parameters of this formula, the sample size cannot be determined before the first monitoring period. The sample size calculation is automated in an Excel spreadsheet (Emissions Reductions calculations) so that different \bar{u} values (the number of units to be sampled in each group) can be used and the effect that this has on the number of groups to be sampled can be observed. The number of biogas digesters to sample in each region (\bar{u}) and the number of villages to be visited (c) will therefore be established at CPA level. AENOR validation team has reproduced the calculations applying the proposed formula and the exemplary figures, and concludes that the calculation method is correct and the results are in line with the standard.

As per the POA-DD and the calculation validated by the DOE, project proponents have applied 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project. This reliability specification is applied to determine the sampling requirements for each individual parameter value determined through a sampling effort.

When developing a sampling plan, project proponents have proposed a method for the calculation of the sample size required to achieve a required level of reliability (90/10). The calculation is dependent on all of the following as well as the target level of confidence and the precision, 90/10:

- (a) The type of parameter of interest (see table above)
- (b) The target value (see table above)

The proposed sampling plan has been validated by AENOR, to conclude it will provide parameter value estimates in an unbiased and reliable manner including determining:

- (a) The proposed sample size and sampling method is adequate to achieve the minimum confidence/precision requirements (90/10). AENOR has been able to reproduce the sample size calculation in order to validate the proposed sample size calculation;
- (b) The proposed sampling plan ensures that samples are randomly selected and are representative of the population.

If the sample size calculation returns a value of less than 30 samples in total (i.e. the number of groups (c) multiplied by the number of biogas digesters within each group (\bar{u})), then the number of units (\bar{u}) to be sampled in each group will be adjusted to return a minimum total sample size of 30, as specified in paragraph 12 of the *Standard for Sampling and Surveys for CDM*. AENOR has validated that the Sampling Plan

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presented in the PoA-DD includes the objectives, data to be collected, target population, sampling frame, sample method, sample size, procedures for administering data collection and minimizing errors, and implementation details. *Project Activities and Programme of Activities* (EB 69, Annex 4).

Therefore, AENOR by its experience and the assessment of the documentation considers:

- The sampling plan presents a reasonable approach for obtaining unbiased, reliable estimates of the variables. The monitoring will be carried out through a survey and the sample size will be selected following a 90% confidence and 10% margin of error. These requirements are in accordance with the requirements set forth in the methodology therefore the approach is considered correct.
- The sampling plan will ensure that samples are randomly selected and are representative of the population. The multi-stage sampling will be applied and the precision will be established in accordance with recommended values by UNFCCC (90/10).
- The population is clear from the Target Population description. The target population description will be the households/farms/communities in which the biogas digesters have been installed identified by the database of the CME, therefore AENOR considers the target population correct.
- The proposed sampling approach is clear. A multi-stage sampling will be applied the clusters consist in geographical areas and subunits. Sampling will be employed proportionate to cluster size, therefore AENOR considers that the sampling approach is clear.
- The sample is representative. AENOR considers that the proposed sample size calculation and sampling method is adequate to achieve the minimum confidence/precision requirements. The data collection/measurement method is likely to provide reliable data. The validation team confirms that the methods of data collection are clear and unambiguous, and do not include any question that could be subject to measurement error.
- Training will be given to staff responsible for the data collection system and a quality control and assurance strategy plan will be established, therefore AENOR considers it correct. The validation team confirms that the sample database will be kept electronically as well as original hard copies. The sample will be selected randomly. The validation team confirms that the described QA/QC procedures are adequate to handle any missing data, wrong data or uncertainty, and ensure a real, measurable and conservative calculation of emission reductions from a CPA.
- The procedures for the data measurements are well defined. As stated above a strategy plan will be established. This strategy includes a planning phase in which a clear definition of the target population, sampling frame and sample size are determined
- The frame contains the information necessary to implement the sampling approach. The parameters to be monitored within each CPA will depend on the methodology applied.

On the other hand, roles and responsibilities, training actions, archiving, measuring and calculation procedures, equipment details, and calibration requirements are clearly mentioned in the PoA-DD.

Therefore, in opinion of the AENOR team, all necessary parameters required by the selected approved methodologies are contained in the monitoring plan. They are clearly described and comply with the requirements of the methodologies. The monitoring of the parameters involved in the emission reductions has been established in a transparent and clear way. Thus, AENOR confirms the monitoring plan is in compliance with the requirements of the applied methodologies, the *Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities* (EB 69, Annex 4) and the *"Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities"*.

3.11.2. Implementation of the Monitoring Plan

After the review of evidence provided by the PPs, the interview and communications with PPs, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data management, sampling plan and survey, quality and assurance control procedures, are sufficient to ensure that the emission achieved resulting from the proposed PoA can be reported ex post and verified.

Finally, AENOR considers that the CME is able to implement the monitoring plan stated in the PoA-DD taking into account all the reasons explained above.

3.12. Comments by Local Stakeholders

The local stakeholder consultations are carried out for each CPA prior to its inclusion in this PoA. Due account of any comments received is considered as well at the CPA level.

3.13. Environmental Impacts

Environmental Analysis is chosen to be done at CPA level.

The impacts of biodigester systems are not expected to differ greatly between CPAs across Kenya hence the impact of all CPAs will be similar. Besides, environmental analysis will be carried out at the CPA level and reported in each CDM-SSC-CPA-DD.

Thus, each and every CPA will have the relevant permits and licences ensuring the compliance with the relevant applicable regulation.

3.14. Operational Management and Verification Plan

Management structure of the monitoring plan is defined in Section A.4.4 of the PoA-DD.

The operational and management plan for this PoA is based on written procedures and guidelines to facilitate the multinational operational requirements of the CME.

As per the *"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities"*. Version 02.1, a PoA Management System [17] has been designed at the time of validation by the CME following the applicable requirements of the Standard mentioned above (paragraph 17 of EB65, Annex03). AENOR has verified that CME's management system is structured into high level management procedures, operational procedures and operational tools and guidelines.

Besides, AENOR has assessed that the management system includes the following issues:

- (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;
- (b) Records of arrangements for training and capacity development for personnel;
- (c) Procedures for technical review of inclusion of CPAs;
- (d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);
- (e) Records and documentation control process for each CPA under the PoA;
- (f) Measures for continuous improvements of the PoA management system;

Operational management and verification plan in the final PoA-DD is assessed to be appropriate for the purpose of the programme monitoring. The overall responsibility for the monitoring will be held by SimGas IP BV. (Managing Entity).

The CME will collect the information submitted by each CPA of the PoA. All monitoring data will be stored and archived. Emission reduction calculation of each CPA will be based on data collected and analyzed by SimGas IP BV. according to the Management System developed for the proposed PoA and provided to the validation team. The database is confirmed as the data management system designed specifically for the PoA to ensure the data accuracy, to avoid double counting, to addressing uncertainty (QA/QC), and to manage monitoring data storage for the monitoring of all CPAs.

3.15. Criteria for Inclusion of SSC-CPA in the PoA

As per *"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities"*. Version 02.1 the CME has designed the eligibility criteria of the PoA following the applicable requirements of the Standard mentioned above (paragraph 14 of EB65, Annex03). A procedure to crosscheck that all the eligibility criteria fulfil the requirements of the Standard has been developed by the CME, under the PoA Management System, and has been validated by AENOR.

A complete list of CPA Eligibility Criteria has been set up in section A.4.2.2 of the final PoA-DD and section B.2 of the generic CPA-DD. The list has been validated is deemed appropriate and sufficient:

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Eligibility Criteria Standard	Eligibility Criteria	CPA-DD Indicator
The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	<p>All biogas digesters in each CPA are located within the geographical boundaries of one Host Country.</p> <p>This will be confirmed by the CME by ensuring that each individual installation:</p> <ul style="list-style-type: none"> Is located at an address that lies within the geographical boundaries of [host country] as demonstrated by providing the address of all biogas digesters in the CPA database; Has GPS coordinated that are situated within the geographical boundaries of [host country] as demonstrated by providing the GPS coordinates of all biogas digesters in the CPA database <p>In addition to the geographical boundaries, the boundaries between CPAs are also defined by a time-induced boundary. This includes that each biogas digester within the CPA is commissioned within the timeframe specified in the CPA-DD. The date of construction of each biogas unit is specified by the date of the Commissioning Protocol</p>	This criterion will be verified assessing, Commissioning Protocol [21], CPA Database [22].
Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)	<p>Each biogas digester in the CPA has a unique serial number and programme logo engraved or permanently attached as a nameplate. The serial numbers are listed in the CPA database.</p> <p>[and]</p> <p>The GPS coordinates of the location of each biogas digester is recorded in the CPA database.</p> <p>The CME has an agreement in place with the owner of each individual biogas digester in the CPA in which the owner of each biogas digester transfers the rights to the emission reductions to the CME.</p>	<p>Verifiable evidence:</p> <ul style="list-style-type: none"> Commissioning Protocol CPA Database CME Manual Sales Contract. [18/
Conditions to check the start date of the CPA through documentary evidence	<p>The start date of the CPA is the date at which the commissioning of the first biogas digester is completed. This is recorded in the Commissioning Protocol, which is archived and the date recorded in the CPA database.</p> <p>The database allows for easy verification that the earliest commissioning date is the start date of the CPA.</p>	This criterion will be verified assessing the CPA Database and the Commissioning Protocol.
The PoA-specific	A local stakeholder consultation has been	This criterion will be

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Eligibility Criteria Standard	Eligibility Criteria	CPA-DD Indicator
requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	carried out on Host Country level. An environmental impact analysis (EIA) has been carried out for the CPA, or evidence is provided that the programme activities are exempt from an EIA.	verified assessing Sections C and D of the CPA-DD. Verifiable evidence: – Stakeholder consultation report – EIA exemption notice
Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance	A written confirmation from the CME has been issued for the CPA that no funding from Annex 1 parties has been used for this CPA or that, if used, this did not result in a diversion of official development assistance.	Verifiable evidence: – ODA declaration
Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.	The proposed small scale CPA of the PoA is not a debundled component of a large scale activity because: Each of the independent subsystems/measures included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the applied methodology (not exceeding 450kW _{th} for SSC type I; not exceeding 600tCO ₂ e for SSC type III methodologies).	Verifiable evidence: – Sales Contract – CPA database – Emissions reduction calculation spreadsheet Other credible evidence.
The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality	The CPA demonstrates additionality as detailed in the <i>Guidelines for demonstrating additionality of microscale project activities</i> (EB 68, Annex 26) The CPA will stay below the scale limits, defined as follows	
	(a) Where AMS-I.E or AMS-I.I applies, the size of the CPA is less than or equal 15 MW _{th} ; and (b) Where AMS-III.R applies, the size of the CPA is less than or equal to 20 ktCO ₂ /yr. Whichever CPA capacity is reached first will define the limits of the CPA.	Verifiable evidence: – Sales Contract – CPA Database – Other credible documents
	(b) Where AMS-I.E or AMS-I.I apply, an individual household biogas system in the CPA has a maximum thermal capacity of 4,500 kW _{th} ;	Verifiable evidence: – Sales Contract – Other credible documents
	(c) Where AMS-III.R applies, each of the independent biogas systems in the project activity achieves an estimated annual emissions reduction equal to or less than 600 tCO ₂ e per year	Verifiable evidence: – Sales Contract – CPA Database – Other credible documents
	(d) End users of the subsystems or are households/communities/SMEs.	Verifiable evidence: – Sales Contract

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Eligibility Criteria Standard	Eligibility Criteria		CPA-DD Indicator
The specifications of technology/ measure including the level and type of service, performance specifications including compliance with testing/ certifications	<p>The CPA will install biogas digesters of the following types:</p> <ul style="list-style-type: none"> – Manure-fed biogas systems, which generate biogas and organic fertiliser, and typically measure 2 – 16 m³. Other sizes could be offered in future, as long as they remain below the maximum output capacities in criteria 9 below. – Organic-waste fed biogas systems, which generate biogas from domestic organic waste, and measure 0.55 – 3.5m³. Other sizes could be offered in future, as long as they remain below the maximum output capacities in criteria 9 below. – Other types of biogas digester that are approved by the CME. 		<p>Verifiable evidence:</p> <ul style="list-style-type: none"> – Sales Contract – Commission Protocol – Technical specification documents detailing digester models
Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs.	Only if AMS-I.E applies	All biogas digesters in the CPA [will be/are] replacing non-renewable biomass	<p>See section B.5.2 of the CPA-DD</p> <p>Verifiable evidence:</p> <ul style="list-style-type: none"> • Commissioning protocol; • Other credible documents
	Only if AMS-I.E applies	The CPA demonstrates that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics	<p>See section B.5.2 of the CPA-DD</p> <p>Verifiable evidence:</p> <ul style="list-style-type: none"> – Commissioning protocol – Published literature, official reports and/or statistics
	Only if AMS-I.I applies	Each biogas digester shall have a rated capacity equal to or less than 150 kW _{th}	<p>See section A.4.6 of the CPA-DD</p> <p>Verifiable evidence:</p> <ul style="list-style-type: none"> – Sales Contract – CPA database – Emissions reduction spreadsheet
	Only if AMS-III.R applies:	The CPA comprises the recovery and destruction of methane from manure and organic wastes that would be decaying anaerobically in the absence of the project activity.	<p>See section B.5.2 of the CPA-DD</p> <p>Verifiable evidence:</p> <ul style="list-style-type: none"> – Commissioning protocol;

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Eligibility Criteria Standard	Eligibility Criteria		CPA-DD Indicator
	Only if AMS-III.R applies:	The CPA is limited to biogas digesters installed at individual households or small farms with methane recovery systems that achieve an annual emission reduction of less than or equal to 5 tCO ₂ / year per system.	See section B.5.2 of the CPA-DD Verifiable evidence: – Commissioning Protocol – Sales Contract – CPA Database – Emissions reduction spreadsheet
	Only if AMS-III.R applies:	The CPA specifies that methane emissions are prevented by changing the management practice of a biogenic waste or raw material in order to achieve the controlled anaerobic digestion equipped with methane recovery and combustion system.	See section B.5.2 of the CPA-DD Verifiable evidence: – Commissioning Protocol – Feasibility study
	Only if AMS-III.R applies:	The CPA uses the methodology AMS-III.R in combination with: – AMS-I.I "Biogas/biomass thermal applications for households/small users" or – AMS-I.E "Switch from non-renewable biomass for thermal applications by the user"	Section B.5.2 of the CPA-DD Verifiable evidence: – CPA Database – Emissions reduction calculation spreadsheet
	Only if AMS-III.R applies:	The CPA satisfies the following conditions: – The sludge is handled aerobically. In case of soil application of the final sludge the proper conditions and procedures that ensure that there are no methane emissions is ensured; – Measures are used (e.g. combusted or burnt in a biogas burner for cooking needs) to ensure that all the methane collected by the recovery system is destroyed.	See section B.5.2 of the CPA-DD Verifiable evidence: – Feasibility study – Commissioning Protocol – CME Manual
Where applicable, target group (e.g. domestic/commercial /industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation)	households, communities and /or SMEs, as recorded in the Sales Contract. All biogas digesters will be directly installed at the user's by qualified personnel. All entities involved in the distribution of biogas digesters will have a contractual agreement with the		Verifiable evidence: – Sales Contract CME Manual

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Eligibility Criteria Standard	Eligibility Criteria	CPA-DD Indicator
	CME detailing their role in the CPA and the transfer of emissions rights to the CME.	
Where applicable, the conditions related to sampling requirements for the PoA in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities".	The sampling method applied in the CPA (e.g. in the monitoring plan) follows the <i>Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</i> (EB 69, Annex 4). A 90% confidence interval and a 10% margin of error requirement is achieved for the sampled parameters.	See section B.6 of the CPA-DD Verifiable evidence – CME Manual
Where applicable, the conditions that ensure that every CPA (in aggregate if it comprises of independent sub units) meets the small-scale or microscale threshold ⁶ and remains within those thresholds throughout the crediting period of the CPA.	Where AMS-I.E or AMS-I.I apply: The CPA's power capacity in aggregate remains below 15 MW _{th} throughout the crediting period; Where AMS-III.R applies: The CPA's annual emission reductions in aggregate remains below 20 ktCO _{2e} per year throughout the crediting period;	See Section A.2 of the CPA-DD Verifiable evidence: – Feasibility study – Technical unit design specifications – CPA Database – Emissions reduction calculation spreadsheet

Each CPA will have to demonstrate the additionality individually at CPA level and this will be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. Every CPA will have to meet all the criteria to ensure eligibility to participate in this PoA.

3.16. Provisions in case the eligibility criteria shall be updated

Provisions regarding updating eligibility criteria have been established in the PoA-DD in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" Version 02.1.. Eligibility criteria will be updated by the CME in the following cases:

- a) If the version of methodologies applied by the PoA is revised or replaced, subsequent to being placed on hold:
 - The CME will update the eligibility criteria to the requirements of the revised or new methodologies immediately
 - A new version of the PoA DD and generic CDM-CPA-DD containing updated eligibility criteria validated by a DOE will be submitted to the Board for approval.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CDM-CPA-DD;

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- CPAs that were included before the methodology was put on hold shall will the revised version of the generic CDM-CPA-DD only at the time of the renewal of the crediting period.
 - No action is required if the version of methodologies applied by the PoA is revised without being placed on hold or is withdrawn for the purpose of inclusion in a consolidated methodologies, unless otherwise indicated in the respective report of the meeting of the Board that has approved the new methodologies.
- b) If the boundary of the PoA is amended post-registration to expand the geographic coverage or to include one or more additional host Parties:
- The CME will update the eligibility criteria to reflect the consequent changes
 - A new version of the PoA DD and generic CDM-CPA-DD containing updated eligibility criteria validated by a DOE will be submitted to the Board for approval.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CDM-CPA-DD;
 - CPAs that were included before the revision of the eligibility criteria will apply the revised version of the generic CDM-CPA-DD only at the time of the renewal of the crediting period.
- c) If an issue related to environment integrity is identified by the EB:
- The CME will update the eligibility criteria to reflect the consequent changes
 - A new version of the PoA DD and generic CDM-CPA-DD containing updated eligibility criteria validated by a DOE will be submitted to the Board for approval.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CDM-CPA-DD;
 - CPAs that were included before the revision of the eligibility criteria will apply the revised version of the generic CDM-CPA-DD only at the time of the renewal of the crediting period.
- d) At the renewal of the crediting period of a PoA (at the renewal of the first CPA),
- The CME will update the eligibility criteria as per the latest revised applicable methodologies
 - A new version of the PoA DD and generic CDM-CPA-DD containing updated eligibility criteria validated by a DOE will be submitted to the Board for approval.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the revised eligibility criteria
 - CPAs that were included before the revision of the eligibility criteria will apply the revised version of the generic CDM-CPA-DD only at the time of the renewal of the crediting period.
 - The subsequent CPAs requesting the renewal of the crediting period shall apply the revised version of the generic CDM-CPA-DD.

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In AENOR's opinion provisions regarding updating eligibility criteria established by the CME are in line with the requirements of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities* Version 02.1.

4. Comments by Parties, Stakeholders and NGOs

According to Decision 3/CMP.1, the validator shall make the PoA-DD, specific CPA-DD and generic CPA-DD publicly available and receive, within 30 days, comments on the validation requirements from parties, stakeholders and UNFCCC accredited NGOs, and must also make those comments publicly available.

AENOR published the project document on CDM website, on 24/12/2011 and invited comments by parties, stakeholders and non-governmental organisations. No comments were received during this period.

5. VALIDATION OPINION

AENOR has performed a validation of the Programme of Activities **"SimGas Biogas Programme of Activities"**. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given for the Programmes of Activities to provide for consistent operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the programme design, the baseline and the monitoring plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process, 10 corrective actions and 14 clarifications were raised; all have been successfully closed.

The review of the programme design documentation and additional documents related to baseline and monitoring methodology, and the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

The conclusions can be summarised in detail as follows:

- The PoA is in line with all relevant host country criteria of Kenyan DNA, with the Letter of Approval from The Netherlands and with all relevant UNFCCC requirements for Programme of Activities. The LoA from Kenya is dated on 25/06/2012 and the LoA from the Netherlands is dated on 03/08/2012.
- The operational and management plan established by the coordinating entity is suitable for the PoA validated.
- The baseline has been appropriately identified as per the applied methodology.
- Eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. These requirements include the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.
- The programme's additionality is sufficiently justified in the PoA-DD.
- The Monitoring Plan, Sampling Plan and the Operational and Management Plan are transparent and adequate.
- The calculation of validated CPA emission reductions has been carried out in a transparent and conservative manner, following the approved methodology AMS-III.D.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.
- All information has been also consistently applied in the generic CPA-DD form.

In our opinion, the Programme correctly applies and meets the relevant UNFCCC requirements for the CDM Programme of Activities and the relevant host country criteria.

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The validation has been performed using a risk based approach, as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which would go beyond the purpose.

21/12/2012



Jose Luis Tejera

Authorized person

21/12/2012



Luis Robles Olmos

Chief Validator

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6. CORRECTIVE ACTION REQUESTS, CLARIFICATIONS AND FORWARD ACTION REQUESTS

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 1		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Letters of Approval shall be provided to the DOE team.		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>			
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	The LoA is being issued. This document will be forwarded to the DOE once processed.		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	CAR remains open		
PP RESPONSE #2	This section shall be filled by the PP.		
<i>Corrective action</i>	The LoA from Kenya and The Netherlands have been forwarded to the validator.		
<i>Evidences proposed</i>	Document #51		
DOE Assessment #2	LoAs have been provided and they are in line with the UNFCCC requirements		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 2		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The category of the programme shall be correctly identified and indicated in the PoA-DD. The PoA-DD shall confirm that belongs to one of the project categories defined for small scale CDM project activities.		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	Categories to which the PoA belong have been identified in Section E.1 of the PoA-DD		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	n/a		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Categories to which the PoA belong have been identified in Section E.1 of the PoA-DD		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 3		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>The eligibility criteria shall be stated clearly and the eligibility criteria should be verifiable. The eligibility criteria shall cover the criteria specified in paragraph 14 of the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities" For instance the additionality criteria should be stated. Means of verification and evidences for each criterion shall be provided</p>		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	Eligibility criteria updated in section A.4.2.2 of the PoA-DD and B.2 of the CPA-DD.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	<p>Documents that will be used to provide evidence that the eligibility criteria are fulfilled have been provided to the DOE team. Please refer to documents #30, #31 and #32 for details:</p> <ul style="list-style-type: none"> – Document #14 includes the Stakeholder Consultation Report – Document #28 provides technical design information on the manure-fed system – Document #29 provides technical design information on the organic-fed system. – Document #30 includes the SimGas Sales Agreement for Kenya – Document #31 includes the SimGas Commissioning Protocol for Kenya – Document #32 includes the draft Database listing the parameters that will be collected – Document #33 includes the EIA exemption notice (to be delivered) – Document #34 includes the ODA non-diversion letter (to be delivered) – Document #35 includes the SimGas CME Manual 		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	<p>This assessment is common for the PoA and CPA, since affects to the eligibility criteria. The eligibility criteria should be verifiable and unequivocal, thus generic references to other sections and guidelines are not valid.</p>		

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PP RESPONSE #2	<i>This section shall be filled by the PP.</i>														
<i>Corrective action</i>	<p>The eligibility criteria have been updated to include detailed statements in place of references to other sections of the PoA/CPA-DD. Where references to sections of the PoA/CPA-DD remain, these have been accompanied by a concrete, verifiable statement as eligibility criteria, or with reference to verifiable evidence.</p> <p>The additionality criteria in E.5.2 have also been updated to include clear, verifiable evidence.</p> <p>The CME Manual has been updated to include training conditions for the anaerobic handling of manure to be delivered to end users.</p>														
<i>Evidences proposed</i>	<p>The evidences provided in support of CPA1 are as follows:</p> <table border="1"> <thead> <tr> <th>Eligibility criteria #</th><th>Document Reference</th></tr> </thead> <tbody> <tr> <td>1</td><td> Doc #31 Commissioning Protocol Doc #32 CPA Database Both record that date of commissioning of the biogas system and the location of installation (GPS coordinates and address) </td></tr> <tr> <td>2</td><td> Doc #31 Commissioning Protocol (hard-copy record of serial number and GPS location) Doc #32 CPA Database (electronically lists serial numbers) Doc #35 CME Manual (detailing procedure for issuing serial numbers) Doc #30 Sales Contract (transfer of rights to emission reductions) </td></tr> <tr> <td>3</td><td> Doc #31 Commissioning Protocol Doc #32 CPA Database Both record the date of commissioning of the biogas systems. </td></tr> <tr> <td>4</td><td> Doc #13, #14, #15, #16, #17, #18 Stakeholder consultation documentation Doc #33 EIA exemption notice </td></tr> <tr> <td>5</td><td>Doc #34 ODA non-diversion letter</td></tr> <tr> <td>6</td><td> Doc #36 Emissions reduction calculation spreadsheet (Sheet 'CPA1 AMSIII.R ERs', cell E 28 demonstrating the emissions reductions per unit under AMS-III.R) </td></tr> </tbody> </table>	Eligibility criteria #	Document Reference	1	Doc #31 Commissioning Protocol Doc #32 CPA Database Both record that date of commissioning of the biogas system and the location of installation (GPS coordinates and address)	2	Doc #31 Commissioning Protocol (hard-copy record of serial number and GPS location) Doc #32 CPA Database (electronically lists serial numbers) Doc #35 CME Manual (detailing procedure for issuing serial numbers) Doc #30 Sales Contract (transfer of rights to emission reductions)	3	Doc #31 Commissioning Protocol Doc #32 CPA Database Both record the date of commissioning of the biogas systems.	4	Doc #13, #14, #15, #16, #17, #18 Stakeholder consultation documentation Doc #33 EIA exemption notice	5	Doc #34 ODA non-diversion letter	6	Doc #36 Emissions reduction calculation spreadsheet (Sheet 'CPA1 AMSIII.R ERs', cell E 28 demonstrating the emissions reductions per unit under AMS-III.R)
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5	Doc #34 ODA non-diversion letter														
6	Doc #36 Emissions reduction calculation spreadsheet (Sheet 'CPA1 AMSIII.R ERs', cell E 28 demonstrating the emissions reductions per unit under AMS-III.R)														

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	7	<p>Doc #30 Sales Contract (size of biogas system; type of user recorded)</p> <p>Doc #32 CPA Database (aggregate CPA size)</p> <p>Doc #36 Emissions reduction calculation spreadsheet (Sheet 'CPA1 AMSIII.R ERs', cell E 28 demonstrating the emissions reductions per unit under AMS-III.R)</p>	
	8	<p>Doc #30 Sales Contract (size of biogas system)</p> <p>Doc #28; #29 Technical design documents of manure-fed and organic waste fed systems</p>	
	9	<p>Doc #31 Commissioning Protocol (Baseline survey, replacement of NRB, previous manure management practices; confirmation of handover of biogas stove for combustion of methane)</p> <p>Doc #30 Sales Contract (size of biogas system, type of user,)</p> <p>Doc #32 CPA Database (individual and aggregate size of biogas system; methodologies applied)</p> <p>Doc #36 Emissions reduction calculation spreadsheet (Sheet 'CPA1 AMSIII.R ERs', cell E 28 demonstrating the emissions reductions per unit under AMS-III.R; methodologies applied)</p> <p>Doc #35 CME Manual (procedure to ensure no methane emissions occur when final sludge is applied to soil)</p>	
	10	<p>Doc #30 Sales Contract (type of user)</p> <p>Doc #35 CME Manual (training requirements of personnel)</p>	
	11	Doc #35 CME Manual (Monitoring procedures)	
	12	<p>Doc #28; #29 Technical design documents of manure-fed and organic waste fed systems (size of biogas systems)</p> <p>Doc #32 CPA Database (individual and aggregate size of biogas systems)</p> <p>Doc #36 Emissions reduction calculation spreadsheet (emissions reductions under each methodology)</p>	
DOE Assessment #2		POA DD has been updated and finally it is in accordance with the UNFCCC requirements	
Conclusion <i>Tick the appropriate checkbox</i>		CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 4		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Baseline description has to be defined as per the methodologies applied. Inter alia, The PP is requested to clarify whether the amount of waste or raw materials that would decay anaerobically in the absence of the project activity is determined by survey of a sample group of households/small farms with a 90% confidence interval and 10% margin of error.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The PoA-DD document has been updated to include reference to the correct baseline descriptions as per the applied methodologies. Please see sections E.4 of the PoA-DD.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Baseline description has been improved. But By determination should be clarified.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	Section E.6.2 of the PoA DD has been updated to reflect all the steps as required by methodology AMS-I.E. to calculate the fNRB. Both options for calculating By have been added. Monitoring parameter HG _{py} has been included in Section E.7.1.		
<i>Evidences proposed</i>			
DOE Assessment #2	POA DD has been correctly updated and the calculation has been clarified		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 5		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Provisions regarding the updating of the CPAs in case of held or withdraws of the methodology AMS.I.I; AMS.I.E and AMS.III.R. shall be taken into account		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>Relevant procedures for CPAs under a registered PoA for when a methodology is put on hold or withdrawn are described through EB 55 Annex 38 "Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and Issuance of Certified Emission Reductions for a Programme of Activities".</p> <p>The relevant paragraphs are now included in the PoA-DD section E.1.</p>		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	n/a		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	<p>PoA DD has been updated.</p> <p>CAR is closed</p> <p>This CAR has been reassessed during validation as per the new requirements. PoA DD has been updated correctly to be in line with the Standard</p>		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 6		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PoA –DD does not explain why the PP is applying the “Guideline for demonstrating additionality of microscale project activities.” (EB63 Annex 23) to the programme. The PoA – DD shall be updated (sections A.4.3 and E.5.1) including a complete justification of this issue.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The PoA-DD is revised to address the comment. Please see sections A.4.3. and E.5.1. of the PoA-DD. The eligibility criteria used in order to demonstrate additionality at CPA level have also been updated to ensure greater clarity.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	This assessment is common for the PoA and CPA, since affects to the eligibility criteria. The eligibility criteria should be verifiable and unequivocal, thus generic references to other sections and guidelines are not valid.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	Eligibility criteria for the demonstration of additionality have been clearly outlined in both sections B.2 and B.3 of the CPA-DD, and E.5.2 and A.4.2.2 of the PoA-DD. The table in Section B.3 of the CPA-DD and E.5.2 of the PoA-DD has been updated to clearly detail three columns including the additionality criteria, the means of verification and the verifiable evidence. Reference to verifiable evidence has been included for <u>all</u> eligibility criteria.		
<i>Evidences proposed</i>	See same section in response to CAR 3 above		
DOE Assessment #2	Specific reference to the Guideline for demonstrating additionality of microscale project activities has be stated in the eligibility		

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

	criteria 7.(page 9 of the PoA DD) to avoid misunderstanding.	
PP RESPONSE #3	<i>This section shall be filled by the PP.</i>	
<i>Corrective action</i>	A reference to the updated ' <i>Guidelines for demonstrating additionality of microscale project activities</i> ' has been included in the eligibility criteria 7 to avoid misunderstandings.	
<i>Evidences proposed</i>		
DOE Assessment #3	Clarification has been included and the PoA DD is in line with the UNFCCC requirements	
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 7		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP shall clarify the statement: <i>The proposed PoA is a voluntary initiative of the proposed CME, SimGas BV, a limited liability company registered in the Netherlands. In the Netherlands no laws apply that oblige entities to implement biogas programmes</i>		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Text in A.4.3 updated to match the statement in A.2, in which confirmation that the proposed PoA is a voluntary action is also requested.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	PoA DD has been updated and the description is correct CAR is closed		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 8		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP is kindly requested to improve the description of the calculations, in doing so please follow every step of the methodology. The PoA-DD does not explain clearly that when methodology AMS.III.R applies the baseline emission calculations shall be carried out following paragraph 9(a) of the methodology AMS.III.D		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	The PoA-DD is revised to include the missing information. Please find the new addition under section E.4 "Avoidance of methane emissions from manure handling (AMS-III.R applies)". The description of calculations has been adjusted in paragraph E.6.2.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	PoA DD has been updated and information is correct and it is in accordance with the methodologies.		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 9		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The justification about how leakage will be accounted according the methodology AMS I.E has to be described exactly as per the methodology, information about the sample size and sources have to be identified in the PoA DD. The leakage estimation for AMS I I has to be clarified		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The PoA-DD does not anymore suggest monitoring the leakage but applied the adjustment multiplication factor of 0.95 (equal to 5% leakage). Also the relevant parameter was moved from parameters to be monitored from E.7.1. to E.6.3.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	The clarification for the leakage estimation under AMS-I.I has been added to section E.6.2. of the PoA-DD.		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Information regarding leakage estimation for AMS IE is inconsistent, please refer page 26 of the PoA DD.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	Following revision, only one option is now proposed in the PoA DD: By is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required. Sections E.6.1, E.6.2, E.6.3, and E.7.2 of the PoA DD have been updated to reflect this change.		
<i>Evidences proposed</i>			
DOE Assessment #2	Information is finally consistent.		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CAR 10		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The formulae and parameters used for the determination of the ERs according to the methodologies are not correct. The PoA-DD and the spreadsheets of the CPA have to be provided and updated including exactly the same formulae stated in the applied methodology. The PoA DD shall clearly state the methodological option taken. Calculation for AMS IIID should be clearly described and further information about the calculation has to be provided		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	The formula and corresponding parameters have been revised to be in line with the respective methodologies and have been included in section E.6.2. of the PoA-DD. The calculation from methodology AMS-III.D has also been added to this section.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The formulae description and the references have been improved, but the PP is kindly requested to clarify the correct application of the methodologies, IE: By calculation, etc. The PP is kindly requested to describe the monitoring parameters according to the formulae and assumptions made and in accordance to the methodology.		
PP RESPONSE #2	This section shall be filled by the PP.		
<i>Corrective action</i>	Section B.6.2 of the PoA DD has been updated to reflect all the steps as required by methodology AMS-I.E. to calculate the fNRB. All options are listed. Both options for calculating By have been added. Monitoring parameter HG _{py} has been included in Section E.7.1.		
<i>Evidences proposed</i>			
DOE Assessment #2	Formula description and parameters have been improved but some parameters are not in line with the Methodology. The PP is requested to specify the estimation of annual number of animals, number of animals alive number of animals produced, etc.		

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

PP RESPONSE #3	<i>This section shall be filled by the PP.</i>	
<i>Corrective action</i>	<p>Section E.7.1 of the POA DD has been updated to include the parameters 'Model correction factor' and 'Annual methane conversion factor (MCF) for the baseline manure management system j'.</p> <p>Section E.7.1 of the POA DD has been updated to include the parameters 'Number of days animal is alive in farm in year y' and 'Number of animals produced annually of type LT for the year y'.</p> <p>All references to the General Guidelines for Sampling and Surveys for Small-scale CDM Project Activities have been updated.</p> <p>Responding sections in the CPA DD have been updated accordingly. Emission reduction calculations presented in Section B.5.2 of the CPA DD have been updated. Document #36 with the ER calculation has also been updated.</p>	
DOE Assessment #3	Calculation and parameters are finally correct	
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 1		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP is kindly requested to provide information about how each system will be univocally and externally identified (EG PoA Logo), in order to clarify that the systems are included in this PoA. The identification number and gps coordinates in the data base are internal specifications, but by themselves, they do not avoid the potential inclusion in other CPA or PoA		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	A programme logo will also be attached to all biogas digesters under the programme. Section A.4.2 and A.4.4.1 updated to reflect this.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The PP has showed information about how each system will be univocally and externally identified		
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 2		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A table with a timing of the programme and the main milestones have to be included in the PoA DD		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>			
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	A spreadsheet with major milestones of the CPA and the PoA has been provided to the validator (Document #33)		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Document has not been provided. The PP is requested to clarify whether the mentioned table ii which is described in page 2.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	The start dates refer to the CPA-DD. The dates proposed are tentative based on best estimates with the data available at the time of writing. Where the start date of the CPA was detailed as January 2012, this has been amended to mid 2012 to reflect the estimated date of first commissioning.		
<i>Evidences proposed</i>	A spreadsheet with major milestones of the CPA and the PoA has been provided to the validator (Document #38)		
DOE Assessment #2	The PP is requested to confirm whether the CPA has started, and to provide evidences		
PP RESPONSE #3	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	The CPA has not yet started. A declaration (Document #47) has been provided by SimGas as evidence that the CPA has not yet started.		

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

<i>Evidences proposed</i>	Document # 47	
DOE Assessment #3	Evidences provided and information obtained during on site visit confirms that the CPA has not started.	
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 3		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP is kindly requested to provide a list of the regulation involved, and evidences that this normative has been taken into account		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The PoA is originally designed as a multi-country PoA, of which only the first host country, Kenya has been identified. A list of applicable laws/regulations will therefore be defined at CPA level.</p> <p>Statement added to section A.4.1.2 of the PoA-DD, as follows:</p> <p>All applicable laws/regulations pertaining to the development of biogas digesters in the Host Country shall be taken into account, as demonstrated in the respective CPA.</p>		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Explanation is accepted.		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 4		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP is kindly requested to provide further information in order to confirm that the CPA included in the PoA will not be a de-bundled component from another CDM Programme Activity (CPA) or large scale CDM project activity. Several sizes of the systems have been detected in the PoA DD and this circumstance has to be clarified. In doing so, please refer "Guidance for determining the occurrence of debundling under programme of activities" (EB54, Annex 13).		
PP RESPONSE #1	This section shall be filled by the PP.		
<i>It shall address the corrective action taken in details</i>	Confirmation that a CPA is exempt from the debundling check will be demonstrated at CPA level, using the largest biogas digester capacity to be included in the programme. The de-bundling check is also an eligibility criterion for inclusion of a CPA in the PoA. Section A.4.4.1 has been updated to reflect this.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Confirmation at a CPA level is accepted by the validation team		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 5		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Some inconsistencies and lack of information have been detected in the PoA DD, regarding to the characteristic, types, volume, etc of the proposed system. The PP is kindly requested to clarify the information with regard to the systems to be installed		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The Programme will install two types of biogas digester, differentiated by the design and ensuing input feedstock from which they produce biogas, as outlined below. Other types of biogas digester may be included in future CPAs.</p> <p>Manure-fed biogas digesters will have a capacity ranging from 2 – 16 m³. They run on primarily animal manure, but small quantities of kitchen waste can also be added. These are also referred to as "Rural systems".</p> <p>Organic waste fed biogas digesters will have a capacity ranging from 0.5 – 6m³. They are designed for households/SMEs/communities that do not have livestock. As such, it is expected that these will mostly be applied in urban areas. They are also referred to as "Urban systems".</p> <p>The PoA-DD has been checked for inconsistencies regarding the technological description. Some clarifying text was added to A.4.2.1.</p>		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The description has been improved and the information has clarified the characteristics of the systems.		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 6		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A schedule for the implementation of the PoA is required		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>			
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	A spreadsheet with major milestones of the CPA and the PoA has been provided to the validator. See also CL 2.		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Some inconsistencies regarding the starting date of the CPA have been detected.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	The start dates refer to the CPA-DD. The proposed dates are tentative based on best estimates with the data available at the time of writing. Where the start date of the CPA was detailed as January 2012, this has been amended to mid 2012 to reflect the estimated date of first commissioning.		
<i>Evidences proposed</i>	A spreadsheet with major milestones of the CPA and the PoA has been provided to the validator (Document #38)		
DOE Assessment #2	The PP is requested to confirm whether the CPA has started, and to provide evidences,		
PP RESPONSE #3			
<i>Corrective action</i>	The CPA has not yet started. A declaration (Document #47) has been provided by SimGas as evidence that the CPA has not yet started.		

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

<i>Evidences proposed</i>	Document # 47	
DOE Assessment #3	Evidences provided and information obtained during on site visit confirms that the CPA has not started	
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 7		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The CME is requested to clarify whether a Management System has been developed and implemented according to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities". The Management System Manual has to be provided to the validation team		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>			
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	A CME manual has been prepared and has been made available to the validator (Document # 35)		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	<p>The CME has developed and implemented a management system that includes the following made available to the DOE at the time of validation of the PoA:</p> <ul style="list-style-type: none"> (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; (b) Records of arrangements for training and capacity development for personnel; (c) Procedures for technical review of inclusion of CPAs; (d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA); (e) Records and documentation control process for each CPA under the PoA; (f) Measures for continuous improvements of the PoA management system; (g) Any other relevant elements 		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 8		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A declaration of the non diversion of the ODA shall be provided.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The declaration of the non-diversion of ODA has been provided to the DOE team. The three non-diversion of ODA letters can be found in the following documents:</p> <ul style="list-style-type: none"> • Document #34 includes the non-diversion of ODA from Hivos • Document #40 includes the non-diversion of ODA from AECF • Document #41 includes the non-diversion of ODA from EDF 		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	Documents #34, #40, and #41.		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Evidences have been assessed and deemed correct.		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 9		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP shall indicate how the aerobic treatment of the sludge is confirmed		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Users employing manure-fed biogas digesters will be provided with training as to the proper application of slurry to agricultural land as part of the commissioning procedure (as specified in section A.4.4.1 of the PoA-DD). Whether users are applying manure to agricultural soils as they were trained to do so shall be monitored as part of the annual monitoring survey, parameter "soil application" (see E.7.1 of the PoA-DD).		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Key concepts of the aerobic treatment of the sludge has to be described in the PoA-DD.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	A paragraph detailing the training to be received to ensure that sludge is to be handled aerobically has been added to section E.7.2 of the PoA-DD.		
<i>Evidences proposed</i>			
DOE Assessment #2	The POA DD has been updated and references are deemed correct.		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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"SimGas Biogas Programme of Activities"

TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 10		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>Maximum output capacity calculation has to be clarified, since several models of systems with different volumes are going to be installed. The PDD mention, volume between 2 a 6 m³, and 6-8 m³ and 16 m³. The PP is kindly requested to provide clear information about the type, and characteristics of the equipment.</p>		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The Programme will install two types of biogas digester, differentiated by the input feedstock from which they produce biogas, as outlined below.</p> <ul style="list-style-type: none"> Manure-fed biogas digesters ("rural systems") will have a capacity ranging from 2 – 16 m³. Organic waste fed biogas digesters (urban systems") will have a capacity ranging from 0,5 – 6m³. <p>The maximum size of biogas systems (16 m³) implemented in this PoA is estimated to produce a maximum output capacity of 6 m³ of biogas per day. This amounts to a maximum output of 3.85 kW_{th}, which is below the rated capacity threshold of 150 kW_{th} per biogas digester. The calculation is presented below:</p>		
	$Th_{cap} = \frac{E}{t} \quad \text{where} \quad E = \eta * H_b * V_b$		
	Where:	Value:	Comments:
	t = hours/day usage	5	Data provided by Simgas
	η = efficiency of stove	55%	Stove Report SimGas (Document #12)
	H _b = heat of combustion per unit volume of biogas	21.0 MJ/m ³	Derived from IPC defaults
	V _b = volume of biogas	6 m ³ /day	Data provided by Simgas (Document #39)
	E = Energy available from the biogas system	69.3 MJ/day	Calculated
	E _{th} =	19.25 kWh/day	1 MJ = 0.2778 kWh
	Th _{cap} =	3.85 kW _{th}	Given a 5 hour/day usage

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<i>It shall provide and indentified the evidences proposed (if applicable)</i>	Details of the technical specifications of the biogas digesters to be installed under CPA 1 can be found in Documents # 28, # 29, and #39.
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Usage time should be clarified, the information is confusing.
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>
<i>Corrective action</i>	<p>The size of manure-fed biogas digesters in section A.4.2.1 and A.4.2.2 have been updated to reflect the currently marketable sizes available, up to a maximum size of 3.5 m³. For both biodigester types, other sizes may be offered in future as long as they remain below the maximum output capacity laid out in eligibility criteria 9.</p> <p>Document #39 provides the Field Test report of the biodigesters, which includes reference to the 35 minutes referred to above. This is however the result of a field test conducted for the smallest available biodigester with a capacity of 550 L, while the average size of the biodigesters implemented in this CPA is 6 m³. Furthermore, the 35 minutes relate to "the time at the start and end of each biogas cooking event during the day" and does not indicate the total time spent cooking per household, per day.</p> <p>The 550 L biodigester references in Document #39 produces a daily amount of biogas of 210 L. The 6 m³ unit is expected to deliver 2,25 m³ of biogas per day, hence significantly more. The amount of biogas produced is therefore over 10-fold and could allow for a daily usage of 6.25 hours per day $[(2,250/210) * 35\text{mins}/60\text{mins} = 6.25 \text{ hours}]$. A conservative 5 hours cooking time per household per day is applied instead.</p>
<i>Evidences proposed</i>	Document #39
DOE Assessment #2	Document #39 does not mention 5 hours of cooking time, the PP is requested to clarify this point
PP RESPONSE #3	<i>This section shall be filled by the PP.</i>
<i>Corrective action</i>	A reference to 5.5 hours of usage per day is quoted for the SNV biogas programme in Vietnam (pg 23, Figure 10). This is supported by a United Nations statistics publication (Fig 7.4, page 151), in which it was estimated that Kenyan women spend anywhere between 3 to 5.5 hours near the fire, indicating that the hearth is in use during these periods.

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	The figure quoted for 5 hours of cooking time is therefore considered reasonable.	
<i>Evidences proposed</i>	Document #49 (CD4CDM) and Document #50 (United Nations (2010) The World's Women 2010: Trends and Statistics, New York).	
DOE Assessment #3	AENOR has confirmed that, even in the worst case scenario, the thermal capacity of a biogas digester installed remains below the threshold of 150 kW _{th} .	
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

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TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 11		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Operational and Management Plan is not transparently detailed in the documentation. Organizational structure is not clearly detailed in the POA-DD. E. G. Role of Field personnel and coordination should be clarify		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The roles of entities involved in the programme and procedures have been further detailed in section A.4.4.1		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The operational and management plan has been improved, but further information is required regarding the personnel conducting field measurements.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	A row detailing the roles, responsibilities and training requirements of field measurement personnel has been added to the table in section A.4.4.1 of the PoA-DD.		
<i>Evidences proposed</i>			
DOE Assessment #2	Operational and management plan has been improved and information clarified		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 12		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The PP is requested to clarify whether the monitoring plan fulfils with the guideline for sampling. Further information about the sampling plan has to be developed, EG treatment and minimizing of errors, detailed implementation, etc		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The monitoring procedures and sampling plan for the PoA is in line with the procedures as outlined in paragraph 33 of the General Guidelines for Sampling and Surveys for Small Scale CDM Project Activities, EB50, Annex 30, with details under each of the following subheadings:</p> <ul style="list-style-type: none"> • Sampling Objective; • Field Measurement Objectives and Data to be collected; • Target Population and Sampling Frame; • Sample Method; • Desired Precision/Expected Variance and Sample Size; • Procedures for Administering Data Collection and Minimizing Non-Sampling Errors; • Implementation; <p>The above have been elaborated in E.7.2 of the PoA-DD.</p>		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The monitoring procedures and sampling plan for the PoA is in line with the procedures as outlined in paragraph 33 of the General Guidelines for Sampling and Surveys for Small Scale CDM Project Activities, EB50, Annex 30		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 13		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The measurement equipment of the parameters considered is not detailed in the PoA-DD. Please clarify		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	<p>The measurement equipment used to confirm that biogas digesters are in use (n_{k,y}) is currently being developed and tested by SimGas. This will be applied in the PoA once it is established that the measurement equipment can achieve the same level of accuracy as surveys and sampling.</p> <p>Equipment to be used in order to assess the flow of biogas through measurement campaigns (BS_{k,y}), as required under AMS I.I, will consist of gas meters.</p>		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Further information regarding the equipment is required.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>	<p>The PoA DD has been updated and a reference to the biogas datalogger has been placed in Section E.7.2 of the PoA DD. Alternatively, a survey will be conducted via sampling to check that all systems are operational. The DOE has also received insight into the technical design documents laying out the main characteristics of the datalogger. This equipment is currently being developed and tested by SimGas.</p>		
<i>Evidences proposed</i>	Documents #42 and #43.		
DOE Assessment #2	Information regarding calibration has to be provided.		

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PP RESPONSE #3	<i>This section shall be filled by the PP.</i>	
<i>Corrective action</i>	Information regarding the calibration of the data logger has been added to Section E.7.2 of the PoA DD, under the header 'Calibration of the data logger'.	
<i>Evidences proposed</i>		
DOE Assessment #3	AENOR validation team has concluded that the information provided is correct and valid for the type of project and equipment	
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>

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TITLE	SimGas Biogas Programme of Activities		
FINDING	CL 14		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The monitoring plan should be improved. EG The monitoring plan of the POA-DD has to include procedures in case of errors or problems		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Section E.7.2 of the PoA-DD has been updated.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Monitoring Plan is in line with the methodologies		
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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"SimGas Biogas Programme of Activities"

7. REFERENCES

Ref	Document Name	Author/Competent Authority
1	PoA-DD SimGas Biogas Programme of Activities version 1	Project Proponent
2	PoA-DD SimGas Biogas Programme of Activities. version 4.1	Project Proponent
3	SimGas Biogas Programme of Activities, Kenya (CPA KE1), 3, 01/10/2012	Project Proponent
4	CDM SSC-generic-CPA-DD	Project Proponent
5	Approved Methodology: AMS I.E version 4	CDM – Executive Board
6	Approved Methodology: AMS III.R version 2	CDM – Executive Board
7	Approved Methodology: AMS III.D version 18	CDM – Executive Board
8	Approved Methodology: AMS I.I version 3	CDM – Executive Board
9	Decision 3/CMP.1 and relevant decisions and guidelines from the EB.	CDM – Executive Board
10	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities. Version 02.1	CDM – Executive Board
11	Relevant decisions and guidelines from the EB.	CDM – Executive Board
12	Guidelines For Demonstrating Additionality of Microscale Project Activities" version 04	CDM – Executive Board
13	CDM Validation and Verification Manual version 01.2	CDM – Executive Board
14	Letter of Approval from the DNA of Kenya	NEMA DNA
15	Letter of Approval from the DNA of The Netherlands	Ministry of Environmental and Infrastructure
16	Specific Instruction for the validation, verification and certification of clean development mechanism (cdm) project activities (IE-DTC-039)	AENOR
17	PoA Management System	Project Proponent
18	Sales contract	Project Proponent

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Ref	Document Name	Author/Competent Authority
19	Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities. Version 03	CDM – Executive Board
20	Commissioning protocol	Project Proponent
21	CPA Database	Project Proponent

ANNEX 1: CDM VALIDATION PROTOCOL

VALIDATION PROTOCOL
PROGRAMME OF ACTIVITIES:
SIMGAS BIOGAS PROGRAMME OF ACTIVITIES

PROJECT PARTICIPANTS:
SimGas IP BV

Validation Type	
<input checked="" type="checkbox"/> Validation of a Programme of Activities	
Validation Team: Luis Robles Olmos(Chief Validator) Jose Antonio Gesto (Validator)	
Version of this Validation Protocol: 04	Date: 2012-12-21

AENOR Reference: 2011/103/CDM/86

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"SimGas Biogas Programme of Activities"

CHECKLIST TOPIC / QUESTION	MoU.	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROGRAMME OF ACTIVITIES				
A.1. Approval				
A.1.1 Have all the parties involved in the Programme of Activities provided a written Letter of Approval of the Programme of Activities?	DR I	No, any Letter of Approval have been provided CAR 1 – The Letter of Approval shall be provided to the DOE team. All the parties involved in the Programme of Activities provided a written Letter of Approval of the Programme of Activities Car is closed	CAR 1	OK
A.1.2 Do the Letters of Approval confirm that: <ul style="list-style-type: none"> The Party is a Party to the Kyoto Protocol The participation is voluntary The CDM Programme of Activities contribute to the sustainable development (host Party) The title of the Programme of Activities is precise and coincides with the title included in the POA-DD? 	DR I	Yes LoAs confirm that <ul style="list-style-type: none"> The Party is a Party to the Kyoto Protocol: yes The participation is voluntary: yes The CDM Programme of Activities contribute to the sustainable development (host Party): Yes The title of the Programme of Activities is precise and coincides with the title included in the POA-DD?: yes 	CAR 1	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case that it has been obtained from the Project participant, how has been assessed its authenticity?	DR I	Letter of Approval be obtained from the project participants. Authenticity was confirming with the respective DNA	CAR 1	OK

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A.1.4. Does the coordinating entity of the PoA identify measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA? (Double accounting methodology)	DR I	<p>The coordinating entity of the PoA identifies in their Management system Manual (section 4.2) measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA.</p> <p>CL 1: The PP is kindly requested to provide information about how each system will be univocally and externally identified (EG PoA Logo), in order to clarify that the systems is included in this PoA. The identification number and gps coordinates in the data base are internal specifications, but by themselves, they do not avoid the potential inclusion in other CPA or PoA.</p> <p>Eligibility criteria ensure that that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA</p> <p>CL is closed</p>	CAR 1 CL 1	OK
A.2. Project participants				
A.2.1. Is the form required for the indication of project participants correctly applied in the POA-DD?	DR	Yes, the form is correctly included in the POA-DD.	OK	OK
A.2.2. Is the participation of all project participants approved by a Party to the Kyoto Protocol?	DR	Yes	CAR 1	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the POA-DD (in particular annex 1)?	DR	Yes. The information is consistent.	OK	OK

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A.2.4. Have parties participating in the CDM POA designated a national authority and a coordinating/managing entity for the POA?	DR I	The Coordinating Entity is designated and transparent detailed in the PoA-DD. Nevertheless, once LoA has been issued, the approval of the Coordinating Entity has been checked.	CAR 1	OK
A.2.5. Is the authority and responsibility of the coordinating/management entity clearly described?	I	Yes. The coordinating entity is SimGas IP BV , The role and main activities of the Coordinating Entity are clearly described and it was confirmed during the on site visit.	OK	OK
A.2.6. Is the Coordinating Agency a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board?	DR I	Coordinating Agency is a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board	CAR 1	OK
A.3. Programme Design Document				
A.3.1. Does the used programme title clearly enable to identify the unique CDM Programme of Activities? Is it consistent in all section of the POA-DD and in all documents?	DR I	Yes, the title is "SimGas Biogas Programme of Activities". The title is consistent in the entire document.	OK	OK
A.3.2. Is there any indication concerning the version number and the date of the version?	D	Yes, there are indications concerning the version number and the date of the version.	OK	OK
A.3.3. Is this consistent with the time line of the project's history?	DR	CL 2: A table with a timing of the programme and the main milestones have to be included in the PoA DD Time line is consistent with the of the project's history. CL is closed	CL 2	OK

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A.3.4. Is the POA-DD prepared in accordance with the latest template and guidance from the CDM Executive Board?	DR	Yes, the format of the CDM-PoA-DD used is exactly in accordance with the last format published in the UNFCCC web page (CDM SSC-PoA-DD version 01):	OK	OK
A.3.5. Has the POA-DD been published for Global Stakeholder Consultation (GSC) in the UNFCCC webpage?	DR	Yes. The CPA-DD was public for stakeholder consultation on 24/12/2011.	OK	OK
A.3.6. Have there been any comments during the GSC process?	DR	During the GSC process no comments were received.	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	Not applicable since no comments were received.	OK	OK
A.4. Description of the Programme of Activities				
The POA-DD (section A.2) shall contain a clear description of the Programme of Activities that provides the reader with a clear understanding of the precise nature of the Programme of Activities.				
A.4.1. Is the description delivering a transparent overview of the Programme of Activities?	DR I	The description of the Programme included in the PoA-DD is transparent and accurate.	OK	OK
A.4.2. What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?	DR I	During on site visit validation team could check the situation of the PoA, and several meeting were hold.	CL 2	OK
A.4.3. Is the information provided by these proofs consistent with the information provided by the POA-DD?	DR	Yes, information provided by these proofs is consistent with the information provided by the POA-DD	CL 2	OK
A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the POA-DD? If not, justify.	I	Yes, an onsite visit was conducted during 12/01/24 and 2011/01/26	OK	OK
A.5. Technical description of the Programme of Activities				

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The POA-DD (section A.4) shall contain a clear description of the Programme of Activities that provides the reader a clear understanding of the technical aspects of its implementation.				
<i>A.5.1. Location of the Programme of Activities</i>				
A.5.1.1. Is the definition of the boundary for the POA established in terms of a geographical area within which all CPAs will be implemented?	DR I	Yes, the Programme of Activities will be implemented within the geographical limits of Tanzania and Kenya and other host countries to be added in due course. During Validation Tanzania was removed as Host party.	OK	OK
A.5.1.2 Do the requirement that all applicable national and/or sectoral policies and regulations of the host country within the boundaries chosen taken into account?	DR I	The boundaries of the Programme have been well established.. CL 3: The PP is kindly requested to provide a list of the regulation involved, and evidences that this normative has been taken into account. Although originally the PoA was multi country, during validation has been selected to be developed in Kenya. Validation team has proved that the project activity is in line with National laws. CL is closed	CL 3	OK
<i>A.5.2. Category of the Programme of Activities</i>				
A.5.2.1. To which category(ies) does the Programme of Activities belonging to? Is this category correctly identified and indicated?	DR I	The proposed SSC-PoA falls in the type I and type III scope 1 and scope 15 (Agriculture) categories. CAR 2 The category of the programme shall be correctly identified and	CAR2	OK

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		indicated in the PoA-DD. The PoA-DD shall confirm that belongs to one of the project categories defined for small scale CDM project activities. Types have been clearly identified. CAR is closed		
A.5.2.2. Does the Programme qualify as a small scale CDM Programme of Activities as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	Yes, the project is qualified as SSC CDM Programme Activity under the "General Guidelines to SSC CDM Methodologies" because the installed capacity will not increase 15MW (45 MW thermal) and the emission reductions every year will not go beyond the limits of 60ktCO _{2e} /year.	OK	OK
A.5.2.3. Does proposed POA confirm to one of the project categories defined for small scale CDM project activities?	DR	POA confirms to the project categories defined for small scale CDM project activities	CAR2	OK
A.5.2.3. In the case of a small scale Programme of Activities, is it justified that the CPAs are not a debundled component of a larger CPAs?	DR I	CL 4: The PP is kindly requested to provide further information in order to confirm that the CPA included in the PoA will not be a de-bundled component from another CDM Programme Activity (CPA) or large scale CDM project activity.. Several sizes of the systems have been detected in the PoA DD and this circumstance has to be clarified. In doing so, please refer "Guidance for determining the occurrence of debundling under programme of activities" (EB54, Annex 13). CPAs are not a debundled component of a larger CPA CL is closed	CL4	OK
<i>A.5.3. Technology to be employed by the Programme of Activities</i>				

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<p>A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the programme will reduce greenhouse gas emission transparent and suitable?</p>	<p>DR I</p>	<p>The description of the technology to be applied provides sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance. The explanation on how the PoA will reduce greenhouse gas emission is transparent and suitable in section A.2 of the PoA-DD.</p> <p>CL 5: However some inconsistencies and lack of information have been detected in the PoA DD, regarding to the characteristic, types, volume, etc of the proposed system. The PP is kindly requested to clarify the information with regard to the systems to be installed.</p> <p>Description of the technology to be applied is sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance.</p> <p>CL is closed</p>	<p>CL 5</p>	<p>OK</p>
<p>A.5.3.2. Does the programme require extensive initial training and maintenance efforts in order to be carried out as scheduled during the life POA period? If so, does the POA make provisions for meeting training and maintenance needs?</p>	<p>DR I</p>	<p>Yes, provisions for training and capacity development of the personnel and maintenance needs are included in the Management System Manual of the PoA.</p>	<p>OK</p>	<p>OK</p>
<p>A.5.3.3. Is a schedule available for the implementation of the POA and are there any risks for delays?</p>	<p>DR I</p>	<p>No schedule has been provided.</p> <p>CL 6-A schedule for the implementation of the PoA is required.</p> <p>schedule available for the implementation of the POA has been provided</p>	<p>CL6</p>	<p>OK</p>
<p><i>A.5.4 Eligibility Criteria</i></p>				

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A.5.4.1. Are the eligibility criteria for inclusion of a CPA described in the POA sufficiently objective and comprehensive? Are eligibility criteria verifiable?	DR	<p>No, the eligibility criteria for inclusion of a CPA in the PoA are not clearly defined in the PoA –DD and they are not verifiable.</p> <p>CAR 3- The eligibility criteria shall be stated clearly and the eligibility criteria should be verifiable. The eligibility criteria shall cover the criteria specify in paragraph 14 of the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities "For instance the additionality criteria should be stated. Means of verification and evidences for each criterion shall be provided.</p> <p>Eligibility criteria for inclusion of a CPA described in the POA are sufficiently objective, comprehensive and verifiable</p>	CAR 3	OK
A.5.4.2. Do the eligibility criteria defined by the CME comply with the requirements specified in the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities" ?.	DR	<p>Yes, the eligibility criteria are not in accordance with the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities"</p> <p>.</p>	CAR 3	OK
A.5.4.3 Have the CME developed and implemented a Management System according to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for	DR	<p>CL 7: The CME is requested to clarify whether a Management System has been developed and implemented according to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities". The Management System Manual has to be provided to the validation team.</p> <p>CME has developed and implemented a Management System according</p>	CL 7	OK

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Programme of Activities"		to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities" CL is closed		
<i>A.5.5 Public funding of the Programme of Activities</i>				
A.5.5.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR I	The PoA receives Official Development Assistance from the Dutch government. This public funding does not lead to a diversion of ODA. CL 8- A declaration of the non diversion of the ODA shall be provided. The PP has clarified that no diversion of ODA occurs. Cl is closed	CL 8	OK
A.5.5.2. Is all information provided consistent with the details given in remaining chapters of the POA-DD (in particular annex 2)	DR I	Yes, the information provided is consistent.	CL 8	OK
B. BASELINE AND MONITORING METHODOLOGY				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes, the reference number, version number and title of the approved methodologies are clearly indicated in the PDD. The methodology applied is: AMS-I.I.: Biogas/biomass thermal applications for households/small users. Version 2.0 AMS -I.E: Switch from non-renewable biomass for thermal applications by the user", version 04.0 AMS -III.R: Methane recovery in agriculture activities at households/small	OK	OK

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		farm level, version 2.0.		
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	Yes	OK	OK
B.1.3. Does the POA-DD refer to the corresponding tools with their latest approved versions?	DR	No, the PoA-DD does not reflect to any tool.	N/A	OK
B.1.4. Is the baseline methodology applicable to Programmes of Activities?	DR I	<p>CAR 4: Baseline description has to be defined as per the methodologies. Inter alia, The PP is requested to clarify whether The amount of waste or raw materials that would decay anaerobically in the absence of the project activity is determined by survey of a sample group of households/small farms with a 90% confidence interval and 10% margin of error.</p> <p>Yes the baseline methodologies are applicable to Programmes of Activities. CAR is closed</p>	CAR 4	OK
B.2. Applicability of the selected methodology to the Programme of Activities				
B.2.1. Are the chosen tools considered applicable in accordance with the design of the POA and the provisions of the applied methodology?	DR	There are no tools applicable to this PoA.	N/A	N/A

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B.2.2. Is the choice of the methodology correctly justified by the POA-DD and is the POA in conformance with all applicability criteria of the applied methodology?	DR	Yes, the methodologies are transparently justified in the POA-DD and each one of the applicability criteria is detailed in the document.	OK	OK								
B.2.3. Are provisions regarding the updating the CPAs in case of held or withdraw the methodology be taken into account in the POA-DD?	DR	No, there is no provisions regarding the updating of the CPAs in case of held or withdraw of the methodologies AMS.I.E and AMS.III.R. CAR 5 -Provisions regarding the updating of the CPAs in case of held or withdraws of the methodology AMS.I.I; AMS.I.E and AMS.III.R shall be taken into account. This issue has been finally adapted to the new UNFCCC requirements. CAR is closed	CAR 5	OK								
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with “No”												
Applicability criteria from AMS I.E: “Switch from non-renewable biomass for thermal applications by user”												
B.2.4. Criterion 1: This category comprises activities to displace the use of non-renewable biomass by introducing renewable energy technologies. Examples of these technologies include but are not limited to biogas stoves, solar cookers, passive solar homes, renewable energy based drinking water treatment technologies (e.g. sand filters followed by solar water disinfection; water boiling using renewable biomass).	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

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B.2.5. Criterion 2: Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	yes											
Compliance verified?	Yes											
Applicability criteria from AMS III.R: “Methane recovery in agricultural activities at household/small farm level”												
B.2.6. Criterion 1: This project category comprises recovery and destruction of methane from manure and wastes from agricultural activities that would be decaying anaerobically emitting methane to the atmosphere in the absence of the project activity. Methane emissions are prevented by: (a) Installing methane recovery and combustion system to an existing source of methane emissions; or (b) Changing the management practice of a biogenic waste or raw material in order to achieve the controlled anaerobic digestion equipped with methane recovery and combustion system.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

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<p>B.2.7. Criterion 2:</p> <p>The category is limited to measures at individual households or small farms (e.g. installation of a domestic biogas digester). Methane recovery systems that achieve an annual emission reduction of less than or equal to five tonnes of CO2e per system are included in this category. Systems with annual emission reduction higher than five tonnes of CO2e are eligible under AMS-III.D .Methane recovery in animal manure management systems.</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
<p>B.2.8. Criterion 3:</p> <p>This project category is only applicable in combination with AMS-I.C .Thermal energy production with or without electricity. and/or AMS-I.I .Biogas/biomass thermal applications for households/small users. and/or AMS-I.E .Switch from non-renewable biomass for thermal applications by the user.</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
<p>B.2.9. Criterion 4:</p> <p>The project activity shall satisfy the following conditions: (a) The sludge must be handled aerobically. In case of soil application of the final sludge the proper conditions and procedures that ensure that there are no methane emissions must be ensured;</p>	DR	<p>CL 9: The PP shall indicate how the aerobic treatment of the sludge is confirmed</p> <p>Aerobic treatment has been confirmed by the PP. CL is closed</p>	CL 9	OK								

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(b) Measures shall be used (e.g. combusted or burnt in a biogas burner for cooking needs) to ensure that all the methane collected by the recovery system is destroyed.			Applicability checklist	Yes/No			
			Criterion discussed in the POA-DD?	Yes			
			Evidence provided?	ye			
			Compliance verified?	ye			
B.2.10. Criterion 5: Aggregated annual emission reductions of all systems included shall be less than or equal to 60 kt CO ₂ equivalent.	DR		Applicability checklist	Yes/No		OK	OK
Criterion discussed in the POA-DD?			Yes				
Evidence provided?			Yes				
Compliance verified?			Yes				
Applicability criteria from AMS-I.I. Biogas/biomass thermal applications for households/small users							
B.2.11. Criterion 1: This category comprises activities for generation of renewable thermal energy using renewable biomass or biogas for use in residential, commercial, institutional applications (e.g. for supply to households, small farms or for use in built environment of institutions such as schools).	DR		Applicability checklist	Yes/No		OK	OK
Criterion discussed in the POA-DD?			Yes				
Evidence provided?			Yes				
Compliance verified?			Yes				

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Examples of these technologies that displace or avoid fossil fuel use include but are not limited to biogas cook stoves, biomass briquette cook stoves, small scale baking and drying systems, water heating, or space heating systems												
B.2.11. Criterion 2 he total installed/rated thermal energy generation capacity of the project equipment is equal to or less than 45 MW thermal.”		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
B.2.11. Criterion 3 Each unit (e.g. cook stove, heater) shall have a rated capacity equal to or less than 150 kW thermal.”		<p>CL 10: Maximum output capacity calculation has to be clarified, since several models of systems with different volumes are going to be installed. The PDD mention, volume between 2 a 6 m3, and 6-8 m3 and 16 m3. The PP is kindly requested to provide clear information about the type, and characteristics of the equipment.</p> <table><tr><th>Applicability checklist</th><th>Yes/No</th></tr></table>	Applicability checklist	Yes/No	CL 10	OK						
Applicability checklist	Yes/No											

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		<table><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>yes</td></tr><tr><td>Compliance verified?</td><td>yes</td></tr></table> <p>CL is closed, evidences provided are deemed correct</p>	Criterion discussed in the POA-DD?	Yes	Evidence provided?	yes	Compliance verified?	yes		
Criterion discussed in the POA-DD?	Yes									
Evidence provided?	yes									
Compliance verified?	yes									
B.3. Description of the Programme Boundary										
B.3.1 Are all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project scenario and leakage) in accordance with the applied methodology?	DR	Section E.3 of the POA-DD details the gases and sources included in the SSC-CPA boundary and they are in accordance with applied methodology.	OK	OK						
B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?	DR	Yes	OK	OK						
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD?	DR	Yes, the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD	OK	OK						
B.3.4. In case of grid connected electricity POAs, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	The PoA it is not grid connected.	N/A	N/A						

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B.4. Description of the baseline scenario identification				
B.4.1. Is the baseline scenario clearly described?	DR I	Baseline scenario has been clearly described per each methodology.	CAR 4 CAR 4	OK
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM Programme of Activities (assessment and demonstration of additionality):				
B.5.1. Is the PoA additionality assessed according to current versions of : <ul style="list-style-type: none"> • Applicable methodology • Tool used to demonstrate the Additionality • Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and issuance of Certified Emission Reductions for a Programme of Activities • Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities 	DR I	The additionality of the POA has been demonstrated at a CPA level following paragraph 8 of the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities". CAR 6: The PoA –DD does not explain why the PP is applying the "Guideline for demonstrating additionality of microscale project activities." to the programme. The PoA – DD shall be updated (sections A.4.3 and E.5.1) including a complete justification of this issue. Additionality section and references docs, have been updated	CAR 6	OK
B.5.2. Additionality of PoA				
B.5.2.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	DR I	Yes, During the on site assessment the validation team has checked there are no mandatory laws or regulations enforcing requiring the implementation of biogas facilities in rural or urban areas in Kenya and Tanzania.. During validation Tanzania was removed as Host party by the PP CAR 7: The PP shall clarify the statement: The proposed PoA is a voluntary initiative of the proposed CME, SimGas BV, a limited liability	CAR 7	OK

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		<p><i>company registered in the Netherlands. In the Netherlands no laws apply that oblige entities to implement biogas programmes</i></p> <p>It has been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM</p> <p>CAR is closed</p>		
B.5.2.2. If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is not being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	DR I	Not applicable since the programme is not implementing a mandatory policy as it was crosschecked during on site visit.	N/A	N/A
B.5.2.3. Are all assumptions stated in a transparent and conservative manner?	DR	all assumptions are stated in a transparent and conservative manner	CAR 3	OK
B.5.2.4 Is sufficient evidence provided to support the relevance of the arguments made?	DR	Yes, sufficient evidences are provided.	OK	OK
B.5.3 Additionality of the CPA				
B.5.3.1. Is the approach described for demonstrating additionality of a CPA in accordance with the using the current versions of the procedure provided?	DR I	The approach described for demonstrating additionality of a CPA is in accordance with the using the current versions of the procedure provided	CAR 5	OK

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B.5.3.2. Does the PoA define the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality?	DR I	The PoA defines the information of each CPA to ensure the adequate demonstration of additionality. However, the PoA does not follow the criteria of the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and application of Multiple Methodologies for Programme of Activities" ° Once CAR has been solved validation team considers that the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality has been provided and described	CAR 3	OK
B.5.3.3. Is the additionality of a typical CPA demonstrated?	DR I	Yes the additionality of a typical CPA has been demonstrated according to the "Guidelines for demonstrating additionality of microscale project activities." (EB63 Annex 23)"	OK	OK
B.5.3.4. Is sufficient evidence provided to support the relevance of the arguments made?	DR I	Sufficient evidence has been provided to support the relevance of the arguments made	CAR3	OK
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed Programme of Activities?	DR	The emission reductions are calculated using the methodologies, AMS I I ver3 AMS.I.E ver. 4, AMS.III.R ver. 02 and AMS.III.D version18.	OK	OK
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	DR	CAR 8: The PP is kindly requested to improve the description of the calculations, in doing so please follow every step of the methodology. The PoA-DD does not explain clearly that when methodology AMS.III.R applies the baseline emission calculations shall be carried out following	CAR 9, CAR 8	OK

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		<p>paragraph 9(a) of the methodology AMS.III.D version 18.</p> <p>CAR 9: The justification about how leakage will be accounted according the methodology AMS I.E has to be described exactly as per the methodology, information about the size of the sample and sources have to be identified in the PoA DD. The leakage estimation for AMS I I has to be clarified.</p> <p>Options selected are correctly justified and is this justification in line with the situation verified on-site. Therefore CARs are closed</p>		
B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? (<i>Open excel, trazability of data, etc</i>)	DR I	<p>CAR 10: The formulae and parameters used for the determination of the ERs according to the methodologies are not correct. The PoA-DD and the spreadsheets of the CPA have to be provided and updated including exactly the same formulae stated in the applied methodology. The PoA DD shall clearly state the methodological option taken. Calculation for AMS IIID should be clearly described and further information about the calculation has to be provided.</p> <p>The formulae required for the determination of emissions reductions have been finally correctly presented and used.</p> <p>CAR is closed</p>	CAR 10	OK
B.6.1.4 Are all the data and assumptions listed in the POA-DD appropriate and calculations result in a conservative estimate of emission reductions?	DR	<p>Yes, all the data and assumptions listed in the POA-DD are appropriate and calculations result in a conservative estimate of emission reductions</p>	CL4, CAR 8, CAR 9, CAR 10	OK
B.6.1.5. Are the formulae required for the determination of emission reductions correctly presented?	DR	<p>Yes formulae required for the determination of emission reductions is correctly presented</p>	CL4, CAR 8, CAR 9, CAR 10	OK
<i>B.6.2. Data and parameters that are to be reported in the CDM-CPA at validation</i>				

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B.6.2.1. Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	DR	Yes, of parameters presented in chapter E.6.3 is considered to be complete with regard to the requirements of the applied methodology	CAR 10	OK
B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Yes, all the data derived from official data sources or replicable records and have been correctly quoted	CAR 10	OK
B.6.3 Calculation of GHG Emission Reductions – Baseline Emissions <i>It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Yes, the calculations are documented according to the approved methodology and in a complete and transparent manner	CAR 10	OK
B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR I	Yes conservative assumptions have been used when calculating the baseline emissions	CAR 10	OK
B.6.3.3 Are uncertainties in the baseline emission estimates properly addressed?	DR I	Yes uncertainties in the baseline emission estimates are properly addressed	CAR 10	OK
B.6.3.4. Is additional background information on baseline data provided in Annex 3 of the POA-DD? Is this information consistent with data presented by other sections of the POA-DD?	DR I	Baseline information is deemed correct and sufficient	CAR 10	OK

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B.6.4 Calculation of GHG Emission Reductions – Project Emissions <i>It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Yes, the calculations are documented according to the approved methodology and in a complete and transparent manner	CAR 10	OK
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR I	Yes conservative assumptions have been used when calculating the project emissions	CAR 10	OK
B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR I	Yes uncertainties in the project emission estimates are properly addressed	CAR 10	OK
B.6.5. Calculation of GHG Emission Reductions – Leakage <i>It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Yes the leakage options are documented according to the approved methodology and in a complete and transparent manner?	CAR 10	OK
B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR I	Yes conservative assumptions have been used when calculating the leakage emissions?	CAR 10	OK
B.6.5.3. Are uncertainties in the leakage emission estimates	DR	Yes, uncertainties in the leakage emission estimates are properly	CAR 10	OK

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properly addressed?	I	addressed?		
B.7. Application of the monitoring methodology and description of the monitoring plan				
<i>B.7.1. Description of the monitoring plan</i>				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR I	Yes, it is in accordance with the Baseline and Monitoring methodology applied.	OK	OK
B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the POA-DD? Are the monitoring provisions and data parameters that a CPA has to apply correctly described?	DR	Yes, the monitoring plan provides a consistent approach in the context of all parameters to be monitored.	OK	OK
B.7.1.3. Is the proposed sampling methodology used by the DOE for verification correctly described?	DR	Yes	OK	OK
B.7.1.4. In case of no sampling methodology would be used; the system used to assure that no double counting occurs and that the status of verification can be determined anytime for each CPA is transparently described?	DR	NA	NA	NA
B.7.1.5. Are the provisions made for archiving Programme of Activities emission data sufficient to enable later verification?	DR	Provisions for archiving data are consistent with the requirements of the applied methodology: A record keeping system has been prepared and it has been provided to the validation team.	OK	OK

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B.7.1.6. Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	<p>CL 11: The Operational and Management Plan is not transparently detailed in the documentation. Organizational structure is not clearly detailed in the POA-DD. E. G. Role of Field personnel and coordination should be clarify</p> <p>Monitoring plan provides a clear description of the organization structure involved in monitoring activities and their responsibilities.</p> <p>CL is closed</p>	CL 11	OK
B.7.1.7. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	N/A	N/A	N/A
B.7.1.8. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes, the registration, monitoring, measurement and reporting procedure has been defined	OK	OK
<i>B.7.2 Compliance of the monitoring plan with the approved methodology</i>				
B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	<p>The list of parameters is considered to be complete with regard to the requirements of the applied methodology.</p> <p>All of them are clearly described in the monitoring plan and in accordance with the methodology and tools</p>	CAR 9	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project	DR	<p>CL 12: The PP is requested to clarify whether the monitoring plan accomplish with the guideline for sampling. Further information about the sampling plan has to be developed, EG treatment and minimizing of errors, detailed implementation, etc.</p> <p>Monitoring plan provides for the collection and archiving of all relevant</p>	CL 12:	OK

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boundary during the crediting period?		data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. CL is closed		
<i>B.7.3 Implementation of the Monitoring Plan</i>				
B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	Means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology	CAR 9	OK
B.7.3.2. Is the measurement equipment described and deemed appropriate?	DR	CL 13 The measurement equipment of the parameters considered is not detailed in the PoA-DD. Please clarify. Measurement equipment description has been deemed correct for the type of project CL is closed	CL 13	OK
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR I	Yes procedures are identified for maintenance of monitoring equipment and installations. Provisions regarding the calibration intervals are included in the monitoring plan	CL13	OK
B.7.3.4. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements or lack of data?	DR I	CL 14: The monitoring plan should be improved. EG The monitoring plan of the POA-DD has to include procedures in case of errors or problems. Yes, the measurement accuracy addressed and deemed appropriate for the type of equipment and project activity. CL is closed	CL 14	OK

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B.7.3.5. A record keeping system for each CPA under the POA is forecasted?	DR I	A record keeping system has been prepared in order to monitor the data of each of the CPA.	OK	OK
B.7.3.6. Is the monitoring Plan sufficient to ensure the verification of a proper implementation of the monitoring plan?	DR I	Yes, monitoring Plan is sufficient to ensure the verification of a proper implementation of the monitoring plan	CL 13 CL 14	OK
B.7.3.7. Are procedures identified to ensure that those operating the CPAs are aware and have agreed that their activity is being subscribed to the POA?	DR I	As it is stated in the POA-DD, the project implementer of a SSC-CPA shall enter into a contractual arrangement with the coordinating entity including provisions regarding this issue.	OK	OK
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when the baseline and monitoring was determined?	DR I	Yes, the date of completion of the application of the baseline study and monitoring methodology is 4/11/2011	OK	OK
B.8.2. Is this consistent with the time line of the POA-DD history?	DR I	Yes	CL 2	OK
B.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR I	Yes, The baseline and monitoring sections have been prepared by Climate Focus	OK	OK
B.8.4. Is information provided whether this person / entity is	DR	Yes, The entity determining the baseline is Climate Focus. Climate Focus	OK	OK

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also considered a project participant?	I	is not a project participant		
C. DURATION OF THE PROGRAMME OF ACTIVITIES / CREDITING PERIOD				
C.1. Duration of the Programme of Activities				
C.1.1. Are the POA starting date and operational lifetime clearly defined and reasonable?	DR I	Yes, the starting date of the Programme is stated as 24/11/2011, the date of the publication of the documentation in the UNFCCC website. The operational lifetime stated in the POA-DD is 28 year. Thus, they are clearly defined and reasonable.	OK	OK
D. ENVIRONMENTAL IMPACTS				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Is the environment analysis undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	The environmental impacts analysis will be done at CPA level as it is clearly indicated in the POA-DD.	OK	OK
D.1.2. Has the analysis of the environmental impacts of the Programme of Activities been sufficiently described in the POA-DD?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A

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"SimGas Biogas Programme of Activities"

D.1.4. Will the Programme create any adverse environmental effects? Have they identified as significant?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.5. Are transboundary environmental impacts identified in the analysis?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
D.2.1. Have the identified environmental impacts been addressed in the programme design sufficiently?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.2.2. Does the programme comply with any other environmental legislation in the host country?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
E. STAKEHOLDERS' COMMENTS				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Is the stakeholders consultation process undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	The stakeholders consultation process will be done at CPA level as it is clearly indicated in the POA-DD.	OK	N/A
E.1.2. Have relevant stakeholders been consulted? Is the exact	DR I	Not applicable since the stakeholders consultation process is made at	N/A	N/A

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date of the consultation process included in the POA-DD		CPA level.		
E.1.3. Have appropriate media been used to invite comments by local stakeholders?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.4. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.5. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A

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"SimGas Biogas Programme of Activities"

ANNEX 2 APPOINTMENT CERTIFICATES

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "SimGas Biogas Programme of Activities"

Madrid, 10 September 2012

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **José Antonio Gesto Vilacoba**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2 Energy generation from renewable energy sources.

TA 15.2 Animal waste management.



José Luis TEJERA OLIVER
CDM Operational Director

VALIDATION REPORT

"SimGas Biogas Programme of Activities"

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "SimGas Biogas Programme of Activities"

Madrid, 10 September 2012

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Luis Robles Olmos**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);

TA 1.2 Energy generation from renewable energy sources.

TA 15.1 Agriculture

TA 15.2 Animal waste management.



José Luis TEJERA OLIVER
CDM Operational Director

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Name: **Rafael Millan**

CDM Chief Validator: N/A

CDM Validator: N/A

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

TA 1.2 Energy generation from renewable energy sources.

TA 15.1 Agriculture

TA 15.2 Animal waste management.



José Luis TEJERA OLIVER
CDM Operational Director

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Madrid, 10 September 2012

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Name: **Carmen Gonzalez**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);

TA 1.2 Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director