



SSC PoA VALIDATION REPORT

BEIJING HUAYU XINDA CONSULTATION
Co.,LTD.

ANIMAL MANURE TREATMENT PROGRAMME IN
ANHUI PROVINCE, JIANGSU PROVINCE AND
YUNNAN PROVINCE

Report No: 8000409274 - 12/331

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PoA Validation Report:	Report No. 8000409274 - 12/331	Rev. No. 0	Date of 1st issue: 2012-12-21	Date of this rev. 2012-12-21
PoA:	Title: Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province	Initial PoA-DD Version: 2012-06-05	Final PoA-DD Version 2012-12-20	
Project Participant(s):	Non-Annex 1 country: China	Annex 1 country: N/A		
	PP from Non-Annex 1 country: Beijing Huayu Xinda Consultation Co.,Ltd.	PP from Annex 1 country: N/A		
	Coordinating Managing Entity Beijing Huayu Xinda Consultation Co.,Ltd			
Applied methodology/ies:	Title: Methane recovery in animal manure management systems	No.: AMS- III.D. ver.18.0	Scope / TA: 15 / 15.2	
	Thermal energy production with or without electricity	AMS-I.C. ver.19.0	1 / 1.1	
	Grid Connected renewable electricity generation	AMS-I.D. ver.17.0	1 / 1.2	
	Renewable electricity generation for captive use and mini-grid	AMS-I.F. ver.2.0	1 / 1.2	
Validation team / Technical Review and Final Approval	Validation Team: Yu Wei Ming[TL] Wang Wei[TE] Li Xue Mei [TM]	Technical review: Stöhr, Christina Walter, Ulrich	Final approval: Schubert, Jochen	
Expected Emission reductions:	Expected emission reductions of 1st real case over the first crediting period: 38,820 tCO _{2e}	(Expected) POA starting date of the duration: 2013-02-01, or the submission date of the PoA, whichever is earlier		
Confidential content:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Key dates of validation:	Publication of PoA-DD: 2012-06-14	Draft Report issued: 2012-07-24	On-site (from): 2012-06-27	On-site (to): 2012-06-29
Summary of Validation Opinion:	<p>In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The PoA is in line with all relevant host country criteria (China) and all relevant UNFCCC requirements for CDM. PoA approval have been obtained from DNA of China vide the Letter of Approval (HCA) dated November, 2012.(No. 4826). <input checked="" type="checkbox"/> The PoA additionality is sufficiently justified in the PoA-DD. <input checked="" type="checkbox"/> The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient. <input checked="" type="checkbox"/> The monitoring plan is transparent and adequate. <input checked="" type="checkbox"/> The calculation of the PoA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of the 1st CPA 38,820 t CO_{2e} are most likely to be achieved within the fixed crediting period. <input checked="" type="checkbox"/> All information has been consistently applied in the PoA-DD form. <input checked="" type="checkbox"/> The conclusions of this report show, that the PoA, as it was described in the project documentation, is in line with all criteria applicable for the validation. 			
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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GSCP	Global Stakeholder Consultation Process
IPCC	Intergovernmental Panel on Climate Change
LSHC	Local Stakeholder Consultation
MS	Management System
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PoA-DDs	(CDM PoA and CPA) Design Documents
PS	Project Standard
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1 OBJECTIVE / SCOPE

The purpose of a PoA validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the programme design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the programme design including especially: the correct application of the methodology, the programme's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PoA-DD and other relevant supporting documents, to ensure that the proposed CDM programme activity meets all relevant and applicable CDM and PoA criteria.

The information included in

- the completed Clean Development Mechanism Programme of Activities Design Document Form (the "CDM-PoA-DD") incl.
 - Part A: Programme of activities (PoA) and
 - Part B: Generic component project activity (CPA)
- one completed real case CDM-CPA-DD (the "Real-Case CDM-CPA-DD"), and
- the relevant supporting documents

was reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Standard^{/VVS/}, carried out a full assessment of all evidence to assess the compliance of the programme with the key areas as outlined in section 7 and 8.4 of the VVS (version 03.0, EB 70)^{/VVS/} as well as the Standard for Demonstration of additionality, development of Eligibility Criteria and Application of Multiple Methodologies for Programme of activities (version 02.0, EB 70)^{/POAR/}.

The validation is not meant to provide any consulting to the project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the programme design.

2 POA DESCRIPTION

2.1 PoA Characteristics

Essential data of the PoA is presented in the following Table 2-1.

Table 2-1: PoA / rcCPA Characteristics

Item	Data		
PoA title	Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province		
1st CPA (real case) title	Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province--CPA0001		
PoA size	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale		
PoA Scope (according to UNFCCC sectoral scope numbers for CDM)	<input checked="" type="checkbox"/>	1	Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/>	2	Energy distribution
	<input type="checkbox"/>	3	Energy demand
	<input type="checkbox"/>	4	Manufacturing industries
	<input type="checkbox"/>	5	Chemical industry
	<input type="checkbox"/>	6	Construction
	<input type="checkbox"/>	7	Transport
	<input type="checkbox"/>	8	Mining/Mineral production
	<input type="checkbox"/>	9	Metal production
	<input type="checkbox"/>	10	Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/>	11	Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/>	12	Solvents use
	<input type="checkbox"/>	13	Waste handling and disposal
	<input type="checkbox"/>	14	Afforestation and Reforestation
	<input checked="" type="checkbox"/>	15	Agriculture
Applied Methodology/ies	AMS-III.D. Version 18.0 AMS-I.C. Version 19.0 AMS-I.D. Version 17.0 AMS-I.F. Version 2.0		
Technical Area(s)	1.1 Thermal energy generation 1.2 Renewable energy generation 15.2 Animal waste management		
Starting date of the duration of PoA	2013-02-01, or the submission date of PoA, whichever is earlier		
CPA Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)		
Start of crediting period of 1 st (real case) CPA	2013-02-01, or the starting date of the operation of CPA0001, whichever is later.		
Estimated tCO ₂ eq reductions of the 1 st CPA over the 1 st crediting period	Annual average	3,882 tCO _{2e}	
	Total estimation over the 1st crediting period	38,820 tCO _{2e}	

2.2 Involved Parties, Coordinating / managing entity(ies), Project Participants of the PoA and operators of individual CPAs

The following parties to the Kyoto Protocol and project participants are involved in this PoA (Table 2-2).

Table 2-2: PoA Parties and project participants

	Name of Party/ies	Name of the Entity/ies	Private or Public	CME
Host Country/ies	People's Republic of China	Beijing Huayu Xinda Consultation Co., Ltd.	Private	<input checked="" type="checkbox"/>
Annex 1 Country/ies				<input type="checkbox"/>

2.3 Characteristics of rcCPA

The details of the 1st (real case) CPA is (are listed) in table 2-3.

Table 2-3: Characteristics of rcCPA

No.	CPA Details
CPA No.:	CPA0001
CPA title:	Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province--CPA0001
CPA Host Country / Region:	China
Operator / Implementer:	<ul style="list-style-type: none"> - Beijing Huayu Xinda Consultation Co., Ltd. (Entity/individual responsible for CPA/CDM implementer) - Hefei City Qianxishanzhuang Agricultural Ecological Garden Co.,Ltd. (Project owner/technical implementer)
CPA location / address:	Feixi County, Hefei City, Anhui Province
Geographical coordinates:	31°30'22"N; 116°40'52"E

2.4 Technical Programme Description

The PoA is located in Anhui Province, Jiangsu Province or Yunnan Province, P.R. China, which is coordinated and managed by Beijing Huayu Xinda Consultation Co., Ltd. (CME).

The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will be collected and fed into an anaerobic digester, the organic matter will be converted into biogas under designed anaerobic conditions.

The residue from the anaerobic treatment system will be collected for land application.

Technical description of biogas utilizations:

Scenario I:

Biogas recovered from the newly installed animal manure treatment system will be utilized for thermal energy generation at the farm with biogas heating equipment and/or with biogas stoves by the nearby residents and/or the farm.

Scenario II:

Biogas recovered from the newly installed animal manure treatment system will be utilized to generate electricity to be used at the livestock farm (captive use) that displaces electricity purchased from Power Grid.

Scenario III:

Biogas recovered from the newly installed animal manure treatment system will be partly utilized for thermal energy generation at the farm with biogas heating equipment and/or with biogas stoves by the nearby residents and/or the farm and partly utilized to generate electricity to be used at the livestock farm (captive use) that displaces electricity purchased from Power Grid.

Scenario IV:

Biogas recovered from the newly installed animal manure treatment system will be utilized to generate electricity that will be supplied to the power grid.

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the PoA consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the following programme documents:
 - the **CDM-PoA-DD (incl. generic CDM-CPA-DD)**
 - the **Real-Case CDM-CPA-DD**
- Desk review of the above mentioned PoA-DD and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

3.2 Contract review

To assure that

- the PoA falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and 2 additional team members, as well as the Technical Review personnel were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Host country Competence	On-site visit
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	YU Wei Ming	TÜV NORD China	TL	LA	<input checked="" type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	LI Xue Mei	TÜV NORD China	TM ^{A)}	LA	<input checked="" type="checkbox"/>	15.2, 1.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	WANG Wei	TÜV NORD China	TM ^{A)}	TE	<input type="checkbox"/>	1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Wang Jing Yi	TÜV NORD China	OT ^{B)}	T	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Stöhr, Christina	TÜV NORD Cert GmbH	TR ^{B)}	LA	<input checked="" type="checkbox"/>	1.2	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Walter, Ulrich	TN Germany	TR ^{B)}	LA	<input checked="" type="checkbox"/>	1.1, 1.2, 15.2	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Schubert, Jochen	TÜV NORD Cert GmbH	FA ^{B)}	SA	<input checked="" type="checkbox"/>	1.2	<input type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member; TR: Technical review; OT: Observer-Team; OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

All team members contributed to the review of documents, the assessment of the programme activity and to the preparation of this report under the leadership of the team leader.

Technical Experts contributed to the assessment of special aspects of the programme activity, e.g. technical or host country aspects.

In order to qualify further personnel the project team was accompanied by observers and/or trainees as indicated in the table above. They are usually not considered as team members.

Statements of competence for the above mentioned team members are enclosed in annex 8 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PoA-DDs, as received from the project participants, have been made publicly available on the dedicated UNFCCC CDM website prior to the commencement of the validation activity. Stakeholders have been invited to comment on the PoA-DDs within the 30 days public commenting period.

In case comments are received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 6 of this report.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as PoA specific issues as applicable. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CDM PoA is expected to meet;
- It ensures a transparent validation process where the validating entity will document how a particular requirement has been validated and the result of the determination.

The validation protocol is described in Figure 1.

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	Reference	Validation Team Comment	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVS shall be</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

Validation Protocol Table A-1: Requirement checklist				
<i>topic and the individual project activity.</i>		<i>covered in this section.</i>	<i>refers to the draft validation stage.</i>	

Figure 1: Validation protocol table

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PoA-DDs and supporting background documents related to the programme design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Site Visit and Follow-up Interviews

The validation team has carried out a site visit in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the PoA with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project proponent representatives Project consultant Government representatives Stakeholders	<ul style="list-style-type: none"> - Chronological description of the programme activity with documents of key steps of the implementation. - Current status of programme design - Technical details of the programme realization, programme feasibility, designing, operational life time, monitoring of the programme - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Programme activity starting date - CER allocation / ownership - Baseline study assumptions - Additionality - Sustainable development issues

Interviewed Persons / Entities	Interview topics
	<ul style="list-style-type: none"> - Monitoring of CPAs - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PoA-DD and CPA-DD

A comprehensive list of all interviewed persons is part of section 7 'References'.

3.8 Project comparison

The validation team has compared the proposed CDM PoA with similar PoA or CDM projects or technologies that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Programme technology
- Additionality issues
- Reasons for reviews, requests for reviews and rejections within the CDM registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the programme documentation which will have a direct influence the programme results,
- the requirements deemed relevant for validation of the PoA with certain characteristics have not been met or
- there is a risk that the PoA would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation Reporting

After reviewing all relevant documents and taking all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project proponent in order to respond on the issues raised and to revise the programme documentation accordingly.

3.9.3 Final Validation Reporting

The final validation starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this PoA falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PoA-DD and generic CPA-DD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part A: CDM-PoA-DD			
Description of project activity (PoA-A): <ul style="list-style-type: none"> - PoA and CPA specification - Technical PoA and CPA description - CPA Eligibility criteria - Project Participants Technologies and/or measures 	2	0	0
Application of selected approved baseline and monitoring methodology (PoA-B) <ul style="list-style-type: none"> - Application of the Methodology to the PoA and a typical CPA - Programme Boundary and locations - Baseline identification - Calculation of GHG emission reductions <ul style="list-style-type: none"> Project emissions Baseline emissions Leakage - Additionality determination of the PoA - Monitoring Methodology - Monitoring Plan - Project management planning 	6	0	0
Duration and Crediting Period of the PoA (PoA-C)	1	0	0
Environmental impacts (PoA-D)	0	0	0
Local Stakeholder Consultation (PoA-E)	0	1	0
Approval, Authorization and other aspects (PoA-F): <ul style="list-style-type: none"> - Letter of Approval - Contribution to sustainable development - MoC - PoA-DD editorial aspects 	1	0	0

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part B: Generic CDM-CPA-DD			
Overall Consistency with finalized PoA-DD	0	0	0
General description of the CPA (CPA-A) - Responsible entity/individual for the CPA - Identification and description of the CPA - Technical description of the CPA	0	0	0
Eligibility of CPA and Estimation of Emission Reductions (CPA-B) - CPA reference to the PoA - Justification to CPA inclusion eligibility criteria - Demonstration of CPA additionality - Confirmation of CPA boundary - CPA Emission Reduction - CPA Monitoring Plan	0	0	0
Duration and Crediting Period of the CPA (CPA-C)	0	0	0
Environmental impacts (CPA-D)	0	0	0
Local Stakeholder Consultation (CPA-E)	0	0	0
SUM	10	1	0

¹⁾ The letters in brackets refer to the validation protocol

Table 4-2: CPA-PDD versions used for assessments

Version No.	Assessment Round
CPA-DD version 01 dated 2012-06-05 (GSP)	DOE Findings
CPA-DD version 02 dated 2012-12-20	DOE Assessment # 1

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

Finding	A1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>General description</p> <ol style="list-style-type: none"> 1. EB 67 annex 30 requires “Policy/measure or stated goal that the PoA seeks to promote”, which is lacking in section A.2; 2. National technical standards with which activities in the PoA should comply are missing. The energy generation is presented too general. Details are missing. 3. Whether all CPAs would involve in the installation of new digesters is not clear, and the measures to ensure realizing the design are not clear. 4. The roles of entities in the general operating and implementing framework are not sufficiently explained. 5. The conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA is not clear (EB 70, Annex 5, §16 (k)), and the requirements for the debundling check is pending (EB 70, Annex 5, §16 (l)). 6. The references of methodologies are outdated. <p>Associated checklist question(s): A.1.1, A.1.2, A.1.4, A.1.5, A.2.3, A.2.5, A.2.6, A.3.2</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> 1. “Policy/measure or stated goal that the PoA seeks to promote”, has been added to section A.2 of Part I of the revised PoA-DD; 2. National technical standards related to the PoA have been added to Section A.6 of Part I of the revised PoA-DD. 3. All the project activities under the CPAs will involve in the installation of manure treatment system, which has been stated as eligibility criteria (11) in section B.2 of Part I of the revised PoA-DD and all over the DDs. 4. The roles of entities in the general operating and implementing framework have been explained in details in section C of management system of Part I of the revised PoA-DD. 5. The conditions that ensure that every CPA in aggregate meets the small-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA has been added as eligibility criteria (3) in section B.2 of Part I of the revised PoA-DD. <p>The requirements for the debundling check have been added as eligibility criteria (4) in section B.2 of Part I of the revised PoA-</p>		

Finding	A1	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	DD. 6. The references of methodologies have been updated.	
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> 1. OK. Section A.2 has been checked by the validation team. It is described in the PDD that 'The stated goal of the PoA is to enable livestock farmers in Anhui Province, Jiangsu Province and Yunnan Province to install animal manure treatment systems with recovery of biogas and the utilization of the generated biogas as fuel for energy generation, in order to avoid methane emissions due to the open lagoons and to replace electricity and/or thermal energy generated based on fossil fuel.' The approach will be achieved in both financial and technical way. This stated goal has also been checked during the on-site visit and interviews with the local government. The PoA-DD contains a clear, accurate and complete PoA description. 2. OK. The relevant national technical standards w.r.t. biogas plant and biogas engineering and electricity generation have been added to Section A.6. The PoA-DD contains a clear, accurate and complete definition of a CPA under the PoA. The relevant Standards for thermal and electricity generation units have been added as well. 3. OK. The description has been provided and the relevant requirement has been added to eligibility criteria to ensure that the project does not involve alternation of existing installation, and new digester will be installed. 4. OK. The Section C, the role of each entity is well explained including the PoA manager of CME and the project owner. Figure 3 is provided to demonstrate the structure of the operation and management. This structure has been checked during on site visit. A sufficient description of the general operating and implementing framework of the PoA and its CPAs has been given. 5. OK. The Eligibility criteria (3) and (4) have been checked by the validation team. The small-scale criteria and the de-bundling check criteria have been added in the PoA-DD in accordance with 'General Guidelines to SSC CDM methodologies' and 'Guidelines on assessment of debundling for SSC project activities'. The PoA makes provisions for each CPA not to exceed the applicable SSC-threshold throughout the crediting period. 6. OK. The references have been updated. The UNFCCC website has been checked. The programme applies four of approved small scale methodologies and tools referred therein. As per applied methodologies the following methodologies and tools are also used: 	

Finding	A1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
	AMS-III.AO.: “Methane recovery through controlled anaerobic digestion” (Version 1.0); “Tool to calculate the emission factor for an electricity system”(version 02.2.1) “Tool to determine project emissions from flaring gases containing methane” (version 01) “Tool for the Demonstration and Assessment of Additionality” (version 06.0.0) Checklist A.3.3 OK.		
	Part I: Programme of activities	PART II: Generic Component project activity	Consistency
	A.2	A.1	<input checked="" type="checkbox"/> Consistent
	B.3	B.1	<input checked="" type="checkbox"/> Consistent
	B.3	B.2	<input checked="" type="checkbox"/> Consistent
	B.2	B.5	<input checked="" type="checkbox"/> Consistent
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	A2		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>Eligibility Criteria</p> <ol style="list-style-type: none"> How to 'assess the inclusion of CPAs' of each criteria and how to make the criteria verifiable is not clear. The eligibility criteria doesn't meet the requirement of EB 70, Annex 5, §§14 and §§ 20 Whether the CPA shall be approved by the coordinating and management entity is not clear <p>Associated checklist question(s): A.3.5, A.3.6, A.3.7, B.2.2</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> The method of 'assessing the inclusion of CPAs' of each criteria and making the criteria verifiable has been added to section B.2 of Part I of the revised PoA-DD. The eligibility criteria has been updated to be comply with the requirement of EB 70, Annex 5, §§14 and §§ 20. 		

Finding	A2	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	<p>According to the Project situation, requirements in EB 70, Annex 5, §§16 (c)(e)(i) and §§20 have been: 1) combined into EC(12) in Part I, section B.2. of Part I of the revised PoA-DD, and 2) presented in Part II, section B.2 and Section D.2 in the CPA DD. Therefore, the eligibility criteria are fully considered.</p> <p>3. Only when the project activity meets the eligibility criteria checked by CME, the project activity can be added into the PoA, which has been added to section B.2 of Part I of the revised PoA-DD.</p>	
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>1. OK. 'The documents for the CME to check whether the features of potential CPAs meet the eligibility criteria before inclusion in the PoA' has been added to demonstrate how to assess whether the potential meets each eligibility criteria. For detailed assessment, please refer to Annex 7 of this validation report.</p> <p>2. OK. The applicability of the methodologies is discussed in Part II, section B.2 of each scenario, which is referred to in the eligibility criteria (12). The POA-DD has been checked.</p> <p>3. OK. The requirement of the approval by CME has been added to the Section B.2. The POA-DD has been checked.</p> <p>Distinct eligibility criteria have been developed for each type of CPA for the combination of technologies/measures and methodologies.</p> <p>All eligibility criteria have been clearly described, esp. w.r.t. the following points, and detailed assessments are included in Annex 7 of this report:</p> <ol style="list-style-type: none"> (1) Geographical requirement of the CPA boundary (2) Confirmation of no double-counting (3) Technical requirement of the CPA, including procurement (4) CPA start date not before PoA webhosting date (5) Methodology applicability requirement of the CPA (6) Other methodological / tool requirement of the CPA, (7) additionality assessment criteria for each CPA are met (8) Local stakeholder consultation prior to inclusion of the CPA (9) Environmental analysis requirement of the CPA (10) Public funding requirement of the CPA (11) CPA crediting period does not exceed the PoA end date (12) Monitoring requirement of the CPA (13) CPA shall be approved by the coordinating entity <p>The PoA-DD and the generic CPA-DD list all combinations of technologies/measures and/or approved methodologies that will be implemented in the PoA define separately eligibility criteria for each of them.</p>	

Finding	A2	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

Finding	B1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Boundary 1. Certain elements are missing in the technology diagram according to the guidance. 2. Legends in figure 4, figure 7, figure 10, figure 13 are not clear. Associated checklist question(s): B.3.1, B.3.2		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The monitoring points have been added to the technology diagram in section B.3 of part II for each CPA and detailed monitoring information was shown in section B.7.2 for each CPA. 2. Legends in figure 4, figure 7, figure 10, figure 13 have been revised.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. OK. The monitoring points have been added in Section B.3 of part II, which is deemed sufficient according to the project design. The DD has been checked. The added information is deemed appropriate. 2. OK. The legends have been added and the figures have been updated in accordance with technology diagram. The DD has been checked.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B2		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Additionality 1. The confirmation by the CME that the proposed PoA is a voluntary action is missing. 2. The PoA additionality demonstration is not clear.		

Finding	B2	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	<p>3. The suitability of 'Guidelines for demonstrating additionality of microscale project activities' of all CPAs in PoA is not justified.</p> <p>4. The benchmark of IRR is not justified.</p> <p>5. Sensitivity parameters are not justified.</p> <p>6. The critical analysis is missing in the PoA-DD.</p> <p>Associated checklist question(s): B.5.1, B.5.2, B.5.4</p>	
<p>Corrective Action #1</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. The confirmation by the CME that the proposed PoA is a voluntary action was added to section B.1 and the confirmation letter is provided.</p> <p>2. The PoA-DD has been revised.</p> <p>3. The suitability of 'Guidelines for demonstrating additionality of microscale project activities' of all CPAs in PoA has been justified.</p> <p>4. The benchmark of IRR has been justified in PoA-DD (EC7). The project IRR before tax of 7% according to the <i>Economic Evaluation Method and Parameter of Construction Projects</i> (3rd edition) for the stock farming was adopted.</p> <p>5. Nine Sensitivity parameters were selected shown in section B.5 of Part II of PoA-DD.</p> <p>6. The critical analysis has been added to section B.5 of Part II of PoA-DD.</p>	
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>1. OK. The confirmation letter dated 05/06/2012 from the CME^{/CLV/} has been provided to the validation team. It has been confirmed that the proposed PoA is a voluntary action.</p> <p>2. OK. The revised PoA-DD has been checked by the validation team. It clearly demonstrates that the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA. The applied approaches to assess the additionality of CPA are in line with the relevant guidelines and applicable tools. For a detailed assessment please refer to section 5.3.2.</p> <p>3. OK. The eligibility criterion (7) and the additionality analysis in Part II Section B.5 have been revised in the PoA-DD to include the conditions to apply the 'Guidelines for demonstrating additionality of microscale project activities'. The additionality has been appropriately addressed in the PoA-DD. It is clearly described how the programme is additional and the additionality justification follows the requirements of the applied methodologies and tools.</p> <p>4. OK. The benchmark of IRR has been added in the PoA-DD. The reference has been checked by the validation team and similar</p>	

Finding	B2	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	<p>projects have been compared. It is assessed that 7% is reasonable.</p> <p>5. OK. The sensitivity analysis has been revised to include Static total investment, Annual revenue, Annual biogas output, Biogas sale price (incl. VAT), Annual power output, Electricity purchase price (incl. VAT), Coal saving, Coal price (incl. VAT) and Annual O&M cost. The POA-DD has been checked. The parameters applied for sensitivity analysis are reasonable and in line with the guideline on investment analysis.</p> <p>6. OK. The critical analysis has been added in and all parameters have been included. The POA-DD has been checked. The added information is reasonable.</p> <p>Checklist B.5.4.18.</p> <p>OK. The benchmark has been chosen according to the national standard and is deemed as appropriate.</p> <p>Checklist B.5.4.22</p> <p>OK. The project IRR (before tax) of the project included in the CPA is lower than the benchmark (project IRR before tax) of 7% according to the Economic Evaluation Method and Parameter of Construction Projects (3rd edition) for the stock farming. The reference has been checked by the validation team. And the value is standard in the market.</p>	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

Finding	B3		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>Algorithms and/or formulae</p> <p>1. Scenario I</p> <p>1.1 The determination of $B_{0,LT}$ is not quoted correctly</p> <p>1.2 The determination of $PE_{transp,y}$ is not clear</p> <p>1.3 The numbering of the formulas is not clear.</p> <p>2. Scenario II. The 'tool' in sub-step 6 is not defined.</p> <p>3. the findings above are also relevant for scenario III, IV.</p> <p>Associated checklist question(s): B.6.1</p>		

Finding	B3	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. Scenario I 1.1 The determination and suitability of $B_{0,LT}$ has been sufficiently explained in the relevant parts of the DDs. 1.2 From AMS-III.D and actual situation, the source of this parameter is AMS-III.AO, which has been revised all over the DDs. 1.3 The numbering of the formulas was revised. 2. Scenario II The 'tool' was revised to <i>Tool to calculate the emission factor for an electricity system</i> in sub-step 6. 3. The relevant sections of scenario III and IV have been revised according to Scenario I and II.	
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. Scenario I 1.1 OK. Section B.6.1 has been checked by the validation team. The value of $B_{0,LT}$ has been sufficiently explained and Asia value in IPCC. The approach is in line with the applied methodologies. 1.2 OK. The revision has been done and the correct document is referred. The determination of $PE_{transp,y}$ is in line with the applied methodology. The POA-DD has been checked. 1.3 OK. The numbering of the formula has been revised to be consistent. The POA-DD has been checked. 2. OK. The 'Tool to calculate the emission factor for an electricity system' has been clearly referred in the PoA-DD. The POA-DD has been checked against the referenced tool. 3. OK. All scenarios have been updated. The POA-DD has been checked.	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

Finding	B4		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Ex-ante data 1. Scenario I, the assumptions used in the choice of data of $B_{0,LT}$, MCF_i , $\eta_{BL,thermal}$ are not clear 2. The value of $EF_{grid,CM,y}$ is not justified		

Finding	B4	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	3. the findings above are also relevant for scenario II, III, IV. Associated checklist question(s): B.6.3, B.6.4	
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The assumption used in the choice of data of $B_{0,LT}$, MCF_i was clarified. The determination of $\eta_{BL,thermal}$ was added. 2. The value of $EF_{grid,CM,y}$ has been justified. 3. The corresponding part in scenario II,III,IV was revised according to the comments for Scenario I.	
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. OK. The determination of $B_{0,LT}$, MCF_i and $\eta_{BL,thermal}$ has been checked by the validation team, and it is in accordance with the applied methodology. Conservative assumptions have been adopted when calculating the baseline emissions. 2. OK. The value of $EF_{grid,CM,y}$ has been revised in the PoA-DD. The $EF_{grid,CM,y}$ are 0.7495 tCO ₂ /MWh (ECPG) and 0.6323 tCO ₂ /MWh (SCPG). The values presented in the DDs are in accordance with the national published statistics by the Chinese DNA. 3. OK. All scenarios have been updated. The POA-DD has been checked.	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

Finding	B5		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Operation and management plan 1. The monitoring organization is not clear. 2. Procedure for technical review of CPA inclusion part is missing. 3. The management system is not clear. Associated checklist question(s): B.7.1		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The monitoring organization has been revised according to the actual situation and relevant parts in the DDs are revised accordingly. 2. Procedure for technical review of CPA inclusion part was added. 3. The relevant description was revised to be more clearly.		
DOE Assessment #1	1. OK. The monitoring organization has been revised in the PoA-		



Finding	B5	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
<p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>DD. The PoA manager, project owner and monitoring team will take responsibility accordingly. The organization is checked during on site visit.</p> <p>2. OK. The PoA manager of CME will conduct CPA inclusion (eligibility check), which has been indicated in Section C of PoA-DD.</p> <p>3. OK. The structure and responsibility of management system has been well described in Section C, including the data management. The operational and management plan was established by the CME. The systematic approach has been justified and the management and monitoring manual has been provided to the validation team which has been reviewed. The management system includes a records and documentation control process for each CPA under the PoA.</p> <p>The coordinating/managing entity established operational and management arrangements for the implementation of the PoA, which include a clear definition of roles and responsibilities of personnel involved in the CPA inclusion as well as records of arrangements for training and capacity development. Procedures for technical review of the CPA inclusion part of the management system are available.</p> <p>The record keeping system has been included in the management system to include all CPAs under the PoA.</p> <p>According to the responsibility description, the PoA Manager of CME will develop plan for continuous improvement,</p> <p>The PoA manager of CME and the project owner will take responsibility separately as described in the PoA-DD. Furthermore, to manage the PoA more efficiently and smoothly, a specialized team will be designated by the CME for improvement of operation and management of the PoA.</p>	
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>	

Finding	B6		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	B6	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Monitoring plan <ol style="list-style-type: none"> 1. In Scenario I, the parameters like $EG_{PJ,y}$, $HG_{PJ,y}$, $EC_{ele,PJ,y}$, T, P, is not mentioned in the Section B.7.1 2. How to monitor soil application is not clear. 3. The data unit, source of data, measurement equipment/measurement method, monitoring frequency, QA/QC procedures, purpose of data, SI units in Section B.7.1 are not correct. 4. A clear description of the frequency of the monitoring means is missing. 5. Figure 6 is not in accordance with the monitoring measurement methods described. 6. The verification methods are not specified. 7. The findings above are also relevant for scenario II, III, IV.. <p>Associated checklist question(s): B.7.2</p>	
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> 1. In Scenario I, the parameters of $EG_{PJ,y}$, $HG_{PJ,y}$, $EC_{ele,PJ,y}$, T, P, were added in the Section B.7.1. 2. The method to monitor soil application was based on the requirements of methodology, which has been revised in the PoA-DD. 3. The data unit, source of data, measurement equipment/measurement method, monitoring frequency, QA/QC procedures, purpose of data have been updated according to the applied methodologies in Part II, Section B.7.1 of the PoA DD and Section D.7.1 of the CPA DD. As a conclusion, the QA/QC procedures are stated as subsection 5 of the Part II, Section B.7.2 of the PoA DD and Section D.7.2 of the CPA DD. 4. The description of the parameters and the frequency of the monitoring means have been listed in the monitoring plan. 5. The figure is revised. Meters are indicated in the figure in the monitoring plan. 6. The coordinating/managing entity opts for a verification method that does not use sampling. Each CPA will be monitored and verified, which has been added to section B.7.2 of Part II of PoA-DD. 7. The corresponding part in scenario II, III, IV have been updated. 	

Finding	B6	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<ol style="list-style-type: none"> 1. OK. The missing parameters have been added to the Section B.7.1. The monitoring parameters are in line with the applied methodologies..The list of monitoring parameters is complete. 2. OK. The monitoring of soil application has been revised in the PoA-DD, which is in accordance with the applied methodologies. 3. OK. The data unit, source of data, measurement equipment/measurement method, monitoring frequency, QA/QC procedures, purpose of data have been updated according to the applied methodologies. The means of monitoring of all parameters contained in the monitoring plan is feasible within the PoA design. Means of monitoring covers: <ul style="list-style-type: none"> Operational records Management log Monitored annually Monitored by daily operation On-site data sheets recorded monthly On-site measurement Annually on site measurement Flow meters 4. OK. The description of the parameters and the frequency of the monitoring means have been listed in the monitoring plan, for all monitoring parameters, in Section 7.1 of the PoA-DD. A monitoring plan for all types of CPA has been developed in accordance with the approved monitoring methodologies, and the monitoring provisions and data parameters a CPA has to apply/monitor are identified. 5. OK. The Figure has been updated in the final PoA-DD. And the meters have been indicated including heat generation, electricity consumption and biogas flow. The figure reflects the monitoring procedures described. The POA-DD has been checked. 6. OK. It is clear that all CPAs will be verified. Sampling method is not applied to this project. The POA-DD has been checked. 7. OK. All scenarios have been updated. The POA-DD has been checked. <p>All means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, have been described clearly and they are in line with the methodologies. The monitoring arrangements described in the POA-DD/CPA-DD can be properly implemented in the context of the project activity. The QA/QC procedures are appropriate and sufficient to ensure that the emission reductions achieved from the programme activity can be reported ex-post and verified. Procedures for data management are identified.</p>	

Finding	B6	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

Finding	C1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Duration and crediting period 1. The start date of the duration of PoA is not reasonable according to the registration schedule. This needs to be in line with eligibility criteria 6. 2. The evidence of start date of 1 st real case CPA is missing. Associated checklist question(s): C.1.1, C.1.3, C1.4		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The start date of PoA has been updated to 01/02/2013, The PoA start date is 01/02/2013, or the submission date of the PoA, whichever is earlier. The eligibility criterion (6) was updated accordingly. 2. The evidence of the start date of the 1 st real case CPA, e.g. the Construction Contract and Generator purchase contract has been provided.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. OK. The start date of the duration of PoA has been updated to 2013-02-01, or the submission date of PoA, whichever is earlier. The starting date is reasonable taking the time of registration into account. The PoA-DD has been checked. 2. OK. The Construction Contract dated Sep. 3 th , 2012 has been provided to the validation team. Also, the equipment purchase contract e.g. the Generator Purchase Contract dated Sep. 27 th , 2012 has been provided to the validation team. Therefore, the start date of CPA is 2012-09-03. The starting date is in line with the glossary of terms. To addition, according to eligibility criteria 5, the starting date of any CPA will not be prior to the commencement of the validation of the PoA.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	E1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Stakeholder comments 1. The cities covered in the questionnaires are not verified 2. The evidence for stakeholder comments is missing Associated checklist question(s): E.1.2, E.1.3		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The cities covered in the questionnaires were shown as follows: ➤ Anhui Province: 16 Cities : Hefei, Wuhu, Huainan, Ma'anshan, Chuzhou, Huaibei, Tongling, Anqing, Huangshan, Fuyang, Bengbu, Suzhou, Liu'an, Haozhou, Chizhou and Xuancheng City http://baike.baidu.com/view/4380.htm ➤ Jiangsu Province: 13 Cities: Nanjing, Wuxi, Xuzhou, Changzhou, Suzhou, Nantong, Liangyungang, Huai'an, Yancheng, Yangzhou, Zhenjiang, Taizhou and Suqian City http://baike.baidu.com/view/4141.htm ➤ Yunnan Province: 8 Cities and 8 Autonomous Prefecture: Kunming, Qujing, Yuxi, Baoshan, Zhaotong, Lijiang, Pu'er and Lincang City; Chuxiong Yi, Dali Bai, Honghe Hani and Yi, Wenshan Zhuang, Xishuangbanna Dai, Dehong Dai and Jingpo, Nujiang Lisu and Diqing Zang Autonomous Prefecture. http://baike.baidu.com/view/7242.htm 2. The stakeholders' comments and announcement of the three provinces have been provided.		

Finding	E1	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>1. OK. The cities covered have been identified. The questionnaires have been distributed within the boundary of the PoA. The stakeholder process can be assessed as reasonable.</p> <p>2. OK. The evidence of bulletins, photos and questionnaire have been provided to the validation team. The date of the stakeholder consultation in the PoA-DD has been revised according to the bulletins.</p> <p>The comments have been compiled by question and the summary of comments received can be assessed as complete and adequate. The local stakeholder consultation process is assessed as adequate.</p>	
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>	

Finding	F1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD	
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>Others</p> <p>1. Whether the Party involved wishes to be considered as project participant is not clear.</p> <p>2. Letter of Approval from DNA is missing</p> <p>3. MoC is missing</p> <p>4. A Spelling mistake occurred 'Yunan Province' in the PoA title and PoA-DD</p> <p>Associated checklist question(s): F.1.1, F.1.2, F.2.1-F.2.10, F.3.1-F.3.4</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>1. The Party involved is considered as project participant. Section A.3, A.4 and Annex 1 were revised accordingly.</p> <p>2. Letter of Approval from China DNA has been provided.</p> <p>3. The MoC has been provided.</p> <p>4. In the PDD of GSC version, the project title wrongly stated of "Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunan Province". The project title was revised to be correct as "Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province". As described in the Section A.5 of the PoA DD, the Physical/ Geographical boundary of the PoA was defined as the entire Anhui Province, Jiangsu Province and Yunnan Province. In</p>		

Finding	F1	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	<p>which the “Yunnan Province” was located in the Southern West of China; its Longitude is 97°31'39"-106°11'47"E and Latitude of 21°8'32"-29°15'8"N.</p>	
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<ol style="list-style-type: none"> 1. OK. China is directly involved as project participant. The POA-DD has been revised and checked. 2. OK. The Letter of Approval from China DNA^{/HCA/} has been provided to the validation team. 3. OK. The Modalities of Communication^{/MoC/} has been provided to the validation team. 4. OK. The project title has been revised and the corresponding part in the PoA-DD has been updated. The title is in accordance with the HCA and the official name of Yunnan Province. <p>The CME provided the LoA from China's DNA. The project title is clearly referenced in the documents. The China's DNA website (http://cdm.ccchina.gov.cn/website/CDM/pdf/Item_new/Item_new9985.pdf) is referred to check if the project has received the HCA and to confirm the authenticity. The project activity is listed and the authenticity is confirmed.</p> <p>The HCA was issued by the National Development and Reform Commission of People's Republic of China. By means of checking the UNFCCC website, it could be confirmed that the department is listed as DNA^{/unfccc/}.</p> <p>The HCA confirms that China approved the Kyoto Protocol to the United Nations Framework Convention on Climate Change on 2002-08-30 and is a Party to the Kyoto Protocol.</p> <p>The HCA confirms that Beijing Huayu Xinda Consultation Co., Ltd. is authorized as China's participant to voluntarily participate in and carry out the PoA as the Coordinating/Management Entity.</p> <p>The HCA confirms that the project activity assists the host country China in achieving sustainable development.</p> <p>The project title in the HCA is “Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province”. By means of comparing the project title of the project activity listed in the final PDD, the MoC and HCA, the consistency could be confirmed.</p> <p>The approval is unconditional.</p> <p>The CME listed in the HCA is in accordance with PoA-DD.</p> <p>Beijing Huayu Xinda Consultation Co., Ltd. is defined as project participant, which is approved by China.</p> <p>There is no other project participants other than those authorized listed in the PoA-DD</p>	



Finding	F1	
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> real case CPA-DD
	<p>A valid Modalities of Communication (MoC) has been provided to the validation team from Beijing Huayu Xinda Consultation Co., Ltd. with whom the DOE has a contractual relationship.</p> <p>The MoC has been signed by Mr. Yu Jun and Mr. Gao Yunlong on behalf of the respective project participant.</p> <p>The MoC has been checked by the validation team and it is correctly been completed.</p> <p>The MoC confirm that the CME of the PoA, e.g. Beijing Huayu Xinda Consultation Co., Ltd. communicates with the Board. And the participants, the CME and NDRC are in consistent with the PoA-DD.</p>	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the PoA

5.1.1 Technology to be employed

By means of interviews, background research and document reviews, it can be confirmed that a clear and sufficient description of the PoA is provided in the PoA-DD covering all relevant aspects. The precise nature of the PoA and the technical aspects of its implementation are presented in an understandable manner. The description of the PoA is complete, accurate and provides an understanding of the project activities under the PoA. It is in compliance with the PoA-DD and CPA-DD templates and guidelines.

The description of the PoA is complete, accurate and in compliance with the PoA-DD and CPA-DD templates and guidelines.

The PoA is designed to install the animal manure treatment system to the livestock farm in Anhui, Jiangsu and Yunnan province. The manure from the livestock farms will be treated anaerobically and the biogas recovered from the treatment system will be utilized.

Table 5-1 Project Technology (Biogas utilization)

Scenario	Biogas Utilization
I	The recovered biogas will be used for thermal energy generation by the livestock farm and/or nearby residents
II	The recovered biogas will be used for electricity generation for captive use by the livestock farm
III	The recovered biogas will be used for thermal energy generation by the livestock farm and/or nearby residents and power generation for captive use by the livestock farm
IV	The recovered biogas will be used for electricity generation supplied to grid

In the absence of the PoA, the animal manure is left to decay anaerobically and the methane would be emitted directly to the atmosphere, and the equivalent thermal energy and electricity would be generated by fossil fuel. The PoA avoids the methane emission by manure treatment and biogas recovery; and avoids the CO₂ emission by biogas utilization (thermal and/or electricity generation).

The manure treatment system, biogas recovery system and biogas utilization system will comply with Chinese national standards through design, construction, operation and maintenance. The biogas stove and electricity metering will comply with national

standards. Generator will be installed for electricity generation.

Besides, the technology employed is confirmed as environmentally safe and sound. The host country China DNA approves that the PoA complies with the permission requirements provided for in the measures for operation and management of CDM project and assists the host country China in achieving sustainable development.

However, CAR PoA-A1 was raised and successfully closed.

5.1.2 Small Scale POAs

The CPA under this PoA fulfils the criteria bellow per type I and III components.

Type III component

The emission reductions created from methane recovery for each CPA will be lower than the threshold of 60,000tCO_{2e}/yr. The annual emission reductions of the first proposed CPA is estimated to 3,882 tCO_{2e}, which is less than 60kt CO_{2e} annually. Therefore the proposed project is a small scale PoA.

Type I component

Table 5-2 Small Scale Projects

Scenario	Type I component
I	The capacity of thermal energy generation of each CPA under the PoA is less than 45 MW _{thermal} .
II	Electricity generation with a maximum output capacity equivalent up to 15 MW _{ele}
III	The total installed capacity of power and thermal energy generation of each CPA under the PoA is less than 15 MW _{ele} /45 MW _{thermal} .
IV	Electricity generation with a maximum output capacity equivalent up to 15 MW _{ele}

The first proposed CPA is under scenario III. The maximum output capacity of the first proposed CPA is estimated to 2.27MW_{thermal} (expected 0.18 MW_{thermal} generator capacity; 100 households with expected 0.33 MW_{thermal} of the biogas stove and expected 1.76 MW_{thermal} of the heating equipment in the farm)^{/ICC/}, which is less than 45 MW_{thermal}. Therefore the proposed project is a small scale CPA.

The DOE has also checked and confirms that the CME has substantiated that the CPA is not a de-bundled component of large scale project through application of applicable EB 54, Annex 13 – “Guidelines on Assessment of Debundling for SSC Project Activities” (version 03).

5.1.3 Definition of a typical Component Project Activity (CPA)

All necessary information is consistent between the finalized PoA-DD and the generic component of the POA-DD. The appropriate, objective and verifiable eligibility criteria have been defined and included in the PoA-DD. It includes all necessary requirements as stipulated in paragraph 14 of *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities* EB70 Annex 5. For details please refer to the assessment of EC in Annex 7 of eligibility criteria assessment.

There are four scenarios involved in the project activities. Therefore, four generic CPA are defined in part II of PoA-DD.

Table 5-3 Typical CPA

Scenario	Typical CPA
I	Recovered biogas will be utilized to thermal generation which could satisfy the thermal energy demand of livestock farm and/or nearby residents.
II	Recovered biogas will be utilized to electricity generation which will be used for captive use.
III	Recovered biogas will be utilized for thermal generation supplied to the livestock farm and/or nearby residents and power generation for captive use.
IV	Recovered biogas will be utilized to electricity generation which will be delivered to the power grid.

A general description of CPA is well defined in Part II Section A of PoA-DD. As there are four scenarios involved in the PoA, each scenario is illustrated in four sub parts of part II . In Section A of each sub part, a typical CPA is completely and correctly defined.

The PoA-DD has been checked by the validation team. All necessary information is consistent between the finalized PoA-DD Part I and Part II.

A complete list of CPA Eligibility Criteria has been set up in Part I Section B.2 of the PoA-DD and Part II Section B.5, and is deemed appropriate and sufficient, including all necessary information. The documents for the CME to check whether the features of potential CPAs meet the eligibility criteria before inclusion in the PoA have been clearly identified. For detailed assessment, please refer to Annex 7 of this validation report.

However, CAR PoA-A2 was raised and successfully closed.

5.2 PoA Baseline

5.2.1 Application of the Methodology

By consultation of the UNFCCC website, and it is confirmed that the approved methodologies for small-scale CDM project

- AMS-III.D. "Methane recovery in animal manure management systems" (version 18.0)
- AMS-I.C. "Thermal energy production with or without electricity" (version 19.0)
- AMS-I.D. "Grid connected renewable electricity generation" (version 17.0)
- AMS-I.F. "Renewable electricity generation for captive use and mini-grid" (version 02.0)

are applicable to the proposed PoA. The versions of these CDM methodologies are approved by EB and valid during submission for registration.

The combination of the methodologies AMS-III.D and different ways of methane utilization, e.g. AMS-I.C, AMS-I.D and AMS-I.F have been approved for the use within PoA by "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" EB 70, Annex 5)

As per applied methodologies the following methodologies and tools are also used:

- AMS-III.AO.: "Methane recovery through controlled anaerobic digestion" (Version 1.0);
- "Tool to calculate the emission factor for an electricity system"(version 02.2.1)
- "Tool to determine project emissions from flaring gases containing methane" (version 01)
- "Tool for the Demonstration and Assessment of Additionality" (version 06.0.0)

The methodologies and tools are available at:

<http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>

All applicability conditions of the applied methodologies have been checked and confirmed. The PoA design is in line with all requirements and stipulations mentioned in all sections of the applied methodologies. Besides, the PoA design is not expected to result in significant emissions related both to project and leakage, other than those listed in the methodology.

However, CAR PoA-A2 was raised and successfully closed.

5.2.2 PoA Boundary and CPA Boundary

Geographic Boundary

The boundaries (geographically and related to) are correctly given in Part I Section A.5 of the PoA-DD. The geographical boundary of this PoA is Anhui Province, Jiangsu Province and Yunnan Province in People's Republic of China. The range of geographic coordinates has been well presented in the PoA-DD.

Physical Boundary and GHG sources

The boundary (physical and GHG sources) are correctly given in Section D.3 of the generic component of the POA-DD.

As per methodologies, the boundary of the CPA of this PoA is: The livestock; Animal manure management systems; Facilities which recover and flare/combust or use methane; and the facilities which consume the generated energy.

Since the CPA might also involve grid connected electricity generation, all power plants connected to ECPG (Anhui & Jiangsu Province) and SCPG (Yunnan Province) are also included in project boundary.

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.

The methodology indicates CO₂ (type I component) and CH₄ (type III component) are the GHG sources to be included in the boundary. The DOE confirms that the justification by the PP is reasonable and evidenced. Besides, there are no other sources which are impacted by the project and not addressed by the applied methodologies.

However, CAR PoA-B1 was raised and successfully closed.

5.2.3 Baseline Identification

The procedure to identify the most plausible baseline scenario derived from the applied methodologies has been applied correctly and is transparently and sufficiently documented in the PoA-DD.

The baseline is predefined in the corresponding methodologies. The baseline scenario is therefore correctly defined as:

Table 5-3 Baseline Identification

scenario	Type III	Type I
I	<p>➤ AMS-III.D.</p> <p>In the absence of the project activity, animal manure is left to decay anaerobically within the project boundary and methane is emitted to the atmosphere.</p>	<p>➤ AMS-I.C.</p> <p>The simplified baseline is the fuel consumption of the technologies that would have been used in the absence of the project activity.</p>
II		<p>➤ AMS-I.F.</p> <p>Baseline is the electricity displaced with the electricity generated by the renewable energy unit.</p>
III		<p>AMS-I.C. & AMS-I.F. as above</p>
IV		<p>➤ AMS-I.D.</p> <p>The baseline scenario is that the electricity delivered</p>

scenario	Type III	Type I
		to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

DOE confirms that all plausible alternatives have been identified and the non-plausible alternatives have been properly justified and excluded. It has been assessed that the identified baseline scenario is plausible, conservative and reasonably represents what would occur in the absence of the proposed PoA, and the approved methodology used is applicable to the identified baseline scenario. For a detail assessment of the baseline, please refer to Annex 1 and 2.

5.2.4 Calculation of GHG Emission Reductions

The PoA-DD applies steps and equations to calculate project emissions, baseline emissions, leakage and emission reductions as per the requirements of the applied methodologies and the referenced tools.

For the calculation of the GHG emission reductions the correct equations have been used reflecting the methodological choices.

➤ Baseline Emission (BE_y)

The baseline emission reductions would be ex-ante calculated as per defined project scenarios by using of following equations:

Table 5-4 Baseline Emission

Scenario	Type III	Type I	Baseline Emission
I	$BE_{CH_4,y}$	$BE_{thermal,y}$	$BE_y = BE_{CH_4,y} + BE_{Thermal,y}$
II	$BE_{CH_4,y}$	$BE_{Ele,y}$	$BE_y = BE_{CH_4,y} + BE_{Ele,y}$
III	$BE_{CH_4,y}$	$BE_{thermal,y} + BE_{Ele,y}$	$BE_y = BE_{CH_4,y} + BE_{Thermal,y} + BE_{Ele,y}$
IV	$BE_{CH_4,y}$	$BE_{Ele,y}$	$BE_y = BE_{CH_4,y} + BE_{Ele,y}$

➤ $BE_{CH_4,y}$

$$BE_{CH_4,y} = GWP_{CH_4} * D_{CH_4} * UF_b * \sum_{j,LT} MCF_j * B_{0,LT} * N_{LT,y} * VS_{LT,y} * MS\%_{BL,j}$$

Where

$BE_{CH_4,y}$	Baseline emissions due to methane recovery in year y (tCO ₂ e/year)
GWP_{CH_4}	Global Warming Potential (GWP) of CH ₄ (21 tCO ₂ e/tCH ₄)
D_{CH_4}	CH ₄ density (0.00067 t/m ³ at 20 °C and 1 atm pressure)
LT	Index for all types of livestock
j	Index for animal manure management system
MCF_j	Annual methane conversion factor (MCF) for the baseline animal manure management system j
$B_{0,LT}$	Maximum methane producing potential of the volatile solid generated for animal type LT
$N_{LT,y}$	Annual average number of animals of type LT in year y
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)
$MS\%_{Bl,j}$	Fraction of manure handled in baseline animal manure management system j
UF_b	Model correction factor to account for model uncertainties (0.94)

$$VS_{LT,y} = \left(\frac{W_{site}}{W_{default}} \right) * VS_{default} * nd_y$$

W_{site}	Average animal weight of a defined livestock population at the project site
$W_{default}$	Default average animal weight of a defined population, this data is sourced from IPCC 2006
$VS_{default}$	Default value for the volatile solid excretion rate per day on a dry-matter basis for a defined livestock population
nd_y	Number of days in year y where the animal manure management system is operational

➤ **BE_{Thermal,y}**

$$BE_{thermal,y} = BE_{thermal,y,1} + BE_{thermal,y,2}$$

Where:

$BE_{thermal,y}$ Baseline emissions from thermal generation in year y (tCO₂e)

$BE_{thermal,y,1}$ The baseline emissions from steam/heat displaced by the CPA during the year y (tCO₂)

$$BE_{thermal,y,1} = [EG_{PJ,y} / \eta_{BL,thermal}] * EF_{FF,CO_2}$$

$EG_{PJ,y}$	The net quantity of steam/heat supplied by the project activity during the year y (TJ)
$\eta_{BL,thermal}$	Efficiency of the baseline equipment being replaced (determined as per paragraph 30)
$EF_{FF,CO2}$	The CO ₂ emission factor of the fossil fuel that would have been used in the baseline plant obtained from reliable local or national data if available, alternatively, IPCC default emission factors can be used (tCO ₂ /TJ)

$$BE_{thermal,y,2} = [HG_{PJ,y} / \eta_{BL}] * EF_{FF,CO2}$$

$$= \{ [B_{biomassPJ,y} * NCV_{biomass} * \eta_{PJ}] / \eta_{BL} \} * EF_{FF,CO2}$$

$BE_{thermal,y,2}$	The baseline emissions from thermal energy displaced by the project activity using renewable biogas for household or commercial applications/systems (tCO ₂)
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$HG_{PJ,y}$	The net quantity of thermal energy supplied by the project activity using biogas
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η_{BL}	Efficiency of the baseline equipment being replaced (determined as per paragraph 31)
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η_{PJ}	Efficiency of the project equipment measured using representative sampling methods or based on referenced literature values. The efficiency tests shall be conducted following the guidance provided in the relevant national/international standards
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$EF_{FF,CO2}$	The CO ₂ emission factor of the fossil fuel that would have been used in the baseline
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$B_{biomassPJ,y}$	The net quantity of the biogas consumed by households in year y
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$NCV_{biomass}$	The net calorific value of the biogas
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➤ **BE_{Ele,y}**

$$BE_{Ele,y} = EG_{Ele,y} \times EF_{grid,CM,y}$$

Where

$EG_{Ele,y}$	Quantity of net electricity generated by the project activity
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$EF_{grid,CM,y}$	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system”
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According to ‘Tool to calculate the emission factor for an electricity system’ Ver.02.2.1. The grid emission factor was determined ex-ante and estimated as a

combined margin emission factor ($EF_{grid,CM,y}$) taking into account the operating margin emission factor ($EF_{grid,OM,y}$) and built margin emission factor ($EF_{grid,BM,y}$).

The calculation methods are derived from the guidance issued by the Chinese DNA on 2006-12-15 and the Tool to calculate the emission factor for an electricity system. The National Development and Reform Commission of People's Republic of China calculates $EF_{grid,OM,y}$ and $EF_{grid,BM,y}$ for each sub-grid and renews the results every year. The latest data prior to the POA-DD-GSP were used ^{/dna/}

➤ Project Emission (PE_y)

As per applied methodologies AMS-I.F, AMS-I.D, and AMS-I.C, no project emissions from type I activities should be considered, only the project emissions requested by AMS-III.D were considered and calculated as followings

$$PE_y = PE_{PL,y} + PE_{flare,y} + PE_{power,y} + PE_{transp,y} + PE_{storage,y}$$

Where:

$PE_{PL,y}$	Emissions due to physical leakage of biogas (tCO ₂ e)
$PE_{flare,y}$	Emissions from flaring or combustion of the biogas stream (tCO ₂ e)
$PE_{power,y}$	Emissions from the use of fossil fuel or electricity for the operation of the installed facilities (tCO ₂ e)
$PE_{transp,y}$	Emissions from incremental transportation in the year y (tCO ₂ e), as per relevant paragraph in AMS-III.AO
$PE_{storage,y}$	Emissions from the storage of manure (tCO ₂ e)

➤ $PE_{PL,y}$

$$PE_{PL,y} = 0.10 * GWP_{CH_4} * D_{CH_4} * \sum_{i,LT} B_{0,LT} * N_{LT,y} * VS_{LT,y} * MS\%_{i,y}$$

Where:

$MS\%_{i,y}$	Fraction of manure handled in system <i>l</i> in year <i>y</i>
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➤ $PE_{flare,y}$

$$PE_{flare,y} = \sum_{h=1}^{8760} TM_{RG,h} \times (1 - \eta_{flare,h}) \times \frac{GWP_{CH_4}}{1000}$$

Where

$TM_{RG,h}$	Mass flow rate of methane in the biogas in the hour <i>h</i>
$\eta_{flare,h}$	Flare efficiency in hour <i>h</i> ; 0 is used for this parameter. This is conservative.

$$TM_{RG,h} = FV_{RG,h} \times fv_{CH_4,RG,h} \times \rho_{CH_4,n}$$

Where

$FV_{RG,h}$	Volumetric flow rate of the biogas in dry basis at normal conditions in hour h
$fv_{CH_4,RG,h}$	Volumetric fraction of methane in the biogas on dry basis in hour h; The default value of 60% will be used.
$\rho_{CH_4,n}$	Density of methane at normal conditions

➤ **$PE_{power,y}$**

$$PE_{power,y} = EC_{PJ,y} \times EF_{grid,CM,y}$$

Where:

$EC_{PJ,y}$	Quantity of electricity consumed by the Project
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➤ **$PE_{transp,y}$**

$$PE_{y,transp} = (Q_y / CT_y) * DAF_w * EF_{CO_2} + (Q_{y,treatment} / CT_{y,treatment}) * DAF_{treatment} * EF_{CO_2}$$

Q_y	Quantity of raw waste/manure treated and/or wastewater co-treated in the year y
CT_y	Average truck capacity for transportation
DAF_w	Average incremental distance for raw solid waste/manure and/or wastewater transportation
EF_{CO_2}	CO ₂ emission factor from fuel use due to transportation (kgCO ₂ /km, IPCC default values or local values may be used)
$Q_{y,treatment}$	Quantity of compost produced in year y
$CT_{y,treatment}$	Average truck capacity for compost transportation
$DAF_{treatment}$	Average distance for compost transportation

➤ **$PE_{storage,y}$**

$$PE_{storage,y} = GWP_{CH_4} * D_{CH_4} * \sum_{LT,l} \left[\frac{365}{AI_l} \sum_{d=1}^{AI_l} (N_{LT,y} * VS_{LT,d} * MS\%_l * (1 - e^{-k(AI_l-d)}) * MCF_l * B_{0,LT}) \right]$$

AI_l	Annual average interval between manure collection and delivery for treatment at a given storage device l
$VS_{LT,d}$	Amount of volatile solid production by type of animal LT in a day
$MS\%_l$	Fraction of volatile solids (%) handled by storage device l

k	Degradation rate constant (0.069)
d	Days for which cumulative methane emissions are calculated; d can vary from 1 to 45 and to be run from 1 up to AI_i
MCF_i	Annual methane conversion factor for the project manure storage device i from Table 10.17, Chapter 10, Volume 4

➤ **Leakage:**

The leakage was neglected as per AMS-III.D., AMS-I.F., AMS-I.D. and AMS-I.C.

➤ **Emission reductions:**

Emissions reductions achieved by a specific SSC-CPA within PoA are calculated as the differences among the baseline emission (BE_y), the project emission (PE_y).

$$ER_y = BE_y - PE_y$$

According to AMS-III.D ver. 18.0, *the emission reductions achieved by avoiding methane emission will be determined ex post through direct measurement of the amount of methane fuelled, flared or gainfully used. It is likely that the project activity involved manure treatment steps with baseline situation, before the emission reductions achieved by the project activity is limited to the ex post calculated baseline emissions minus project emissions using the actual monitored data for the project activity.* Thus the emission reduction for ex post calculation is as follow:

$$ER_{y,ex-post} = \min [(BE_{y,ex-post} - PE_{y,ex-post}), (MD_y - PE_{power,y,expost})]$$

Where:

$ER_{y,ex post}$	Emission reductions achieved from the methane recovery based on the monitored values
$BE_{y,ex post}$	Baseline emissions calculated as per AMS-III.D using ex post monitored value of $N_{LT,y}$
$PE_{y,ex post}$	Project emissions calculated as per AMS-III.D using ex post monitored value.
MD_y	Methane captured and used gainfully by the project activity
$PE_{power,y,ex post}$	Emissions from the use of fossil fuel or electricity for the operation of the installed facilities based on the monitored values

$$MD_y = BG_{burnt,y} * w_{CH4,y} * D_{CH4} * FE * GWP_{CH4}$$

Where:

$BG_{burnt,y}$	The amount of biogas utilized
w_{CH4}	Methane content in biogas
$PE_{y,ex post}$	project emissions calculated as per AMS-III.D using ex post monitored value.

FE Flare efficiency in year y (fraction, 100% is applied, determined by paragraph 22 of AMS-III.D)

➤ **Summary:**

For the data and parameters not to be monitored throughout the crediting period (i.e. they are determined only once and thus remain fixed throughout the crediting period), it is assessed that all data sources, assumptions and calculations are correct, applicable to the project and contribute to a conservative estimate of the emission reductions.

For the data and parameters subject to monitoring, it is confirmed that the ex-ante estimated values for the monitoring parameters are plausible, and the emission reduction estimates provided in the PoA-DD are reasonable and conservative.

It is confirmed by the DOE by cross-checking the emission reduction calculation spreadsheet for a specific CPA^{XLS/} against all referenced data sources and the requirements of applied methodology and methodological tools that:

- a) All data sources and assumptions used by the CPA under PoA are listed and referenced in the PoA-DD and in line with the methodology. Calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions;
- b) All documentation used by project participants as the basis for assumptions and source of data such as China Electric Power Yearbook and 2006 IPCC Guidelines for National Greenhouse Gas Inventories is correctly quoted and interpreted in the PoA-DD;
- c) All values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity;
- d) The methodologies have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.

However, CAR PoA-B3 and B4 were raised and successfully closed.

5.3 Additionality Determination

5.3.1 PoA

The additionality of PoA will be assessed based on the CPA level. The additionality assessment procedure was involved as EC 7 for inclusion of a CPA. Only when all the project activities involved in a CPA are demonstrated as additionally, the CPA is determined as additional. The potential CPA is qualified to meet the requirement of EC 7.

5.3.2 CPA level

Starting date / Consideration of CDM in decision making

According to Glossary of terms EB 70 Annex 7 version 7 the starting date of a PoA is defined as the date on which the coordinating/managing entity officially notifies the secretariat and the DNA of their intention to seek the CDM status or the date of publication of the PoA-DD for global stakeholder consultation. For this PoA this would be 2012-06-14. However due to problems at uploading via the UNFCCC interface providing an Error message that the date has to be 4 weeks in the future for SSC PoAs, PP has changed the starting date of the PoA to 2013-02-01. The DOE has determined that the CDM was seriously considered in the decision to implement the POA. The start date for CPA0001 was defined as the general construction contract^{/GCC/} signed date on 2012-09-03 which is a date after webhosting PoA-DD and therefore in the future and as per onsite visit no construction began, and as this is later than the commencement of validation of the PoA, i.e., the date on which the PoA-DD is first published for global stakeholder consultation, thus as per paragraph 7(d) of PoA Procedures (version 04.1, EB55 Annex 38), EB 70 annex 5 §16 (d) and paragraph 2 of Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM (EB62 Annex13) as well as VVS §194 (especially VVS version 2 §194) and §107, the DOE has determined that the CDM was seriously considered in the decision to implement the project activity.

Additionality justification as per methodology / methodological tools

The additionality will be justified in accordance with the requirements derived from applied methodologies, PoA Procedures, and General guidelines to SSC CDM methodologies.

According to the PoA-DD one of the following three approaches will be applied for additionality determination of the CPA:

Approach 1: As per "Guidelines for demonstrating additionality of microscale project activities" (Version 4.0):

The CPA under the PoA is deemed additional if it can satisfy the micorscale applicability criteria:

- The total installed capacity of CPA is no more than 5MW_e or 15MW_{thermal}
- The emission reductions from type III components of CPA is no more than 20ktCO_{2e} per year
- The geographic location of the project activity is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone (SUZ) of the host country;

Approach 2: As per positive list of technologies and project activity types in the " Guidelines on the demonstration of additionality of small-scale project activities" (Version 9.0):

The CPA under the PoA is deemed additional if it can satisfy the positive list of technologies and project activity types:

- Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs);
- the size of each unit is no larger than 5% of the small-scale CDM thresholds
 - The emission reductions from type III components of the CPA is no more than 3,000 tCO_{2e} per year;
 - The installed capacity of each unit in the activities included in the CPA is less than 750 kW_e or 2,250 kW_{th}.

Approach 3: As per investment barrier in the "Guidelines on the demonstration of additionality of small-scale project activities":

The CPA under the PoA is deemed additional if the project IRR of each unit is lower than the benchmark of 7%. The calculation will be in line with the "Tool for the demonstration and assessment of additionality".

Investment barrier will be adopted. The investment analysis should be adopted for project under CPA to demonstrate the additionality as per following sub-steps

3.1) Determine an appropriate analysis method

The "Tool for the Demonstration and Assessment of Additionality (Version 06.0.0)"^{TA/} suggests three analysis methods which are simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III).

Since the CPA will generate economic benefits other than CDM related income and therefore simple cost analysis (Option I) is not applicable, benchmark analysis (Option III) is chosen to conduct the investment analysis.

3.2) determine the benchmark

The benchmark for each project scenario has been determined as per national financial assessment standards and demonstrated as follows by taking the project activity and employed technology into account. Each project activity applies the benchmark (project IRR before tax) of 7% according to the Economic Evaluation Method and Parameter of Construction Projects (3rd edition) issued by National Development and Reform Commission of People's Republic of China (NDRC) and Ministry of Construction of People's Republic of China in 2006, for the stock farming.

3.3) Calculation and comparison of financial indicators, project IRR before tax

3.4) Sensitivity analysis

Barrier analysis

Not applicable.

Common practice analysis

The PoA is SSC project. Not applicable.

Additionality-related eligibility criteria

✓ Eligibility criteria for inclusion of a CPA in PoA

The eligibility criteria for inclusion of a SSC-CPA in the PoA are transparently established in PoA-DD and in accordance with *for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities* ver. 02.0 EB70. All the eligibility criteria stipulated in the standard as well as the applicability criteria listed in the applied methodologies are converted and addressed in the PoA-DD.

✓ Operation and management plan of CME

The operation and management plan of CME regarding avoiding double counting and database recording system training to the staff of CPA are appropriately described in PoA-DD.

✓ Match of CPA scenario and methodology

Based on different thermal energy utilization, the likely CPA scenarios (totally four) and the methodologies applied under each scenario are correctly presented for CPA inclusion.

✓ Emission reduction determination

The emission reduction determination of PoA is correctly justified in accordance with the applied methodologies and all the parameter and assumptions for ex-ante determination are well evidenced.

✓ Additionality demonstration

The additionality demonstration of CPA under PoA is appropriately determined.

The DOE confirms that the additionality was demonstrated in accordance with the requirements defined in applied methodologies, the PoA Procedures, and the Guidelines for demonstrating additionality of small-scale project activities.

All the arguments and parameters in the PoA-DD are well evidenced. Therefore, the project is additional.

However, CAR PoA-B2 was raised and successfully closed.

5.4 Operational, Management and Monitoring Plan of the PoA

5.4.1 Operational and Management system

The operation and management plan of CME has been appropriately established in section C of the PoA-DD in order to monitor emission reduction as described in PoA-DD. It clearly indicates the responsibilities for and institutional arrangements for data collection and archiving. CME is responsible to assign the data recording system for CPA. The responsibilities of CME have been clearly addressed:

- ✓ A management system to enable the CDM to check the features of potential CPAs has been developed, implemented and established in PoA-DD.
- ✓ The record keep system for each CPA under PoA will be established by CME.
- ✓ All the staff in CPA will be appropriately trained by CME before work commencement.
- ✓ A procedure for avoid double counting of a CPA that has been already registered either as a CDM project or as a CPA of another PoA will be determined by CME.
- ✓ The provisions to ensure the CPA are aware of and have agreed that their activity is being subscribed to PoA.
- ✓ The monitoring plan cover all monitoring parameters given in the applied monitoring methodology or all parameters which have to be monitored w.r.t. the CPA/PoA boundary.

Management structure of the monitoring plan is defined in Part I Section C and Part II Section B.7.2 of the POA-DD and is assessed to be appropriate for the purpose of the projects monitoring.

The overall responsibility for the monitoring will be held by the CME: Beijing Huayu Xinda Consultation Co., Ltd. and the project owner of each project activity

As per proposed management structure, a PoA manager is appointed by CME and is in fully charge of monitoring and all the issues related to PoA, the detailed responsibilities include the development of PoA; the communication with EB, DNA and related agencies; establish and implementing the monitoring plan and training plan; data collection

Project Owner of each CPA will take in charge of operation and management of project activity, as well as assist PoA manager to conduct monitoring plan according to monitoring manual. A monitoring team will be designated by the project owner, and take in charge of monitoring implementation and the data collection according to the Management Manual^{/MM/}.

The Management Manual^{/MM/} has been provided to the validation team, indicating that the CME has developed and implemented a management system that includes the requirement of para.19 of 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for

programme of activities '(EB 70 Annex 5, Version 02.1)^{/PoAR/}

100% verification on all CPAs is proposed in PoA-DD with a transparent system that can ensure no double counting and clear verification status of all CPAs. The verification method does not involve sampling.

The means of implementation of the monitoring plan, including data management quality assurance and quality control procedures are sufficient to ensure that the ERs to be achieved by the individual CPA can be properly reported and verified

However, CAR PoA-B5 and PoA-B6 were raised and successfully closed.

5.4.2 Monitoring Plan

According to the applied methodologies AMS–III.D, AMS-I.C., AMS-I.D. and AMS-I.F., all monitoring parameters required by the applied methodologies are part of the monitoring plan.

Table 5-5 Monitoring parameters

Parameter	Description	Senario
W_{site}	Average animal weight of a defined livestock population at the CPA site	All
nd_y	Number of days in year “y” where the animal manure management system is operational.	All
$N_{da,y}$	Number of days animal is alive in the farm in the year y	All
$N_{p,y}$	Number of animals produced annually of type LT for the year y	All
$MS\%_{o,i,y}$	Fraction of manure handled in system <i>l</i> in year <i>y</i>	All
$MS\%_l$	Fraction of volatile solids (%) handled by storage device <i>l</i>	All
AI_l	Annual average interval between manure collection and delivery for treatment at a given storage device <i>l</i>	All
Q_y	Quantity of raw waste/manure treated and/or wastewater co-treated in the year	All
$Q_{y,treatment}$	Quantity of compost produced in year	All
CT_y	Average truck capacity for transportation	All
$CT_{y,treatment}$	Average truck capacity for compost transportation	All
DAF_w	Average incremental distance for raw solid waste/manure and/or wastewater transportation	All
$DAF_{treatment}$	Average distance for compost transportation	All
$BG_{burnt,y}$	Biogas combusted in year “y”	I & III
$B_{biomass-1,PJ,y}$	The net quantity of the biogas supplied to heating	I & III

Parameter	Description	Senario
	equipment in year y	
$B_{biomass-2,PJ,y}$	The net quantity of the biogas consumed by households in year y	II & III & IV
$B_{biomass-3,PJ,y}$	The net quantity of the biogas supplied to power generator in year y	All
$FV_{RG,h}$	Volumetric flow rate of the residual gas in dry basis at normal conditions in hour h	All
P_{PJ}	Pressure of the biogas at the flow measurement site	All
T_{PJ}	Temperature of the biogas at the flow measurement site	All
$EG_{PJ,y}$	net quantity of steam/heat supplied by the project activity	I & III
$EG_{ele,y}$	Quantity of net electricity generated by the CPA in year y	II & III & IV
$EC_{ele,PJ,y}$	Quantity of net electricity consumed by the CPA in year y	All
Operation of the household biogas stoves	Continuous operation of the household biogas stoves	I & III
Soil application	Soil application (not resulting in methane emissions) of the residual waste	All

It has been confirmed that for all monitoring parameters, conservative approaches have been ensured to derive values to emission reduction calculations during monitoring period. The monitoring plan can be implemented and all the monitoring arrangements are feasible within the PoA design.

Furthermore the monitoring arrangements described in the monitoring plan are feasible within the project design;

The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CPA within PoA can be reported ex post and verified.

The assessment has been conducted by the DOE by means of reviewing of the documented procedures, interviewing with relevant personnel, project plans and physical inspections of the specific CPA site.

5.5 Duration

According to Glossary of terms EB 70 Annex 7 version 7 the starting date of a PoA is defined as the date on which the coordinating/managing entity officially notifies the secretariat and the DNA of their intention to seek the CDM status or the date of publication of the PoA-DD for global stakeholder consultation. For this PoA this would be 2012-06-14. However due to problems at uploading via the UNFCCC interface providing an Error message that the date has to be 4 weeks in the future for SSC PoAs, PP has changed the starting date of the duration of PoA to 2013-02-01, or the date of registration, whichever is earlier.

The start date of duration has been unambiguously stated in the PoA-DD Part I Section D.1, i.e. 2013-02-01 or on the date of registration, whichever is earlier. The PoA duration is stated in the PoA-DD Part I Section D.2 as 28 years, which is deemed appropriate.

It is confirmed by TÜV NORD that the start date of PoA was unambiguously given in entire PDD and in line with Glossary of CDM Terms Ver. 07. And the end of crediting period for CPA was correctly defined therein in accordance with Clean Development Mechanism Project Standard (version 02.1, EB 70 Annex 2).

However, CAR PoA-C1 was raised and successfully closed.

5.6 Environmental Impacts

Environmental Analysis is chosen to be done at CPA level.

An environmental impact assessment for each construction project is required in China. EIA is stipulated by the host party according to Law of the People's Republic of China on Appraising of Environment Impacts, adopted at the 30th meeting of the Standing Committee of the Ninth National People's Congress on 2002-10-28. Hence, it is confirmed that the environmental analysis would be done at SSC-CPA level is appropriate and in line with the national regulations.

5.7 Comments by Local Stakeholders

The PP followed the invitation procedure for stakeholder comments on the PoA level in line with relevant requirements.

The local stakeholder bulletins were done by CME between April and May, 2012, and relevant stakeholders were invited for comments through questionnaires.

Based on the on-site validation investigation, all relevant local stakeholders have been properly invited to comment on the PoA and the first CPA, and a summary of comments is available in Part I Section F of the PoA-DD. And given the positive comments received, no significant comment was necessary to be taken into account.

However, CL PoA-E1 was raised and successfully closed.

5.8 Participation

5.8.1 Definition of Roles

The POA is an unilateral program of activities. The PoA CME (Coordinating and Managing Entity) is Beijing Huayu Xinda Consultation Co., Ltd., which is authorized as China's Project Participant. CME is the only project participant in this project. China is also a party to the POA represented by the National Development Reform Commission of China. Information regarding project participants is confirmed as consistent in the PoA-DD and HCA.

The Project participants are listed in tabular form in section A.3 of the PoA-DD and this information is consistent with the contact details provided in Annex I of the PoA-DD.

No entities other than those approved as project participants are included in these sections of the PDD.

5.8.2 LOA

LOA(s)

The precise title of this PoA is: Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province.

Host country Approval for this PoA has been issued on November, 2012 vide official document (No. 4826) 'Letter of Approval for Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province' by National Development and Reform Commission of the People's Republic of China, which is confirmed as Chinas DNA. The PoA complies with the permission requirements and assists the host country in achieving sustainable development.

There is no Annex-I country involved in this PoA.

However, CAR PoA-F1 was raised and successfully closed.

5.8.3 MoC

The corporate identity of project participant/CME (Beijing Huayu Xinda Consultation Co., Ltd.), the Party involved (Peoples' Republic of China) and focal points, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories, is included appropriately in the Modalities of Communication ^{/MoC/} statement.

A validation contract signed with Beijing Huayu Xinda Consultation Co., Ltd. is in place, and the name of PPs in the PDD and validation contract is consistent with the names in the MoC.

The representatives submitted the MoC statement to the DOE and the persons signed the written confirmation are the same person, who are duly authorized to do so on behalf of the respective project participant by checking MoC, business license and on-site validation^{/MOC/, /BL/, /IM01/&/IM03/}. It is confirmed that:

- The latest version of the form “Modalities and Communication statement” (F-CDM-MOC) has been used.
- The information required as per the F-CDM-MOC, including its Annex 1, is correctly completed.
- The MoC confirms that the CME, Beijing Huayu Xinda Consultation Co., Ltd. with the Board.
- The CME, Beijing Huayu Xinda Consultation Co., Ltd and the National Development and Reform Commission of the People’s Republic of China are nominated as joint focal signing M-MOC correspond to the PP’s authorized signatories included in F-CDM-MOC, Annex 1.
- The representative submitted the MoC statement to DOE and the one signed the written confirmation are duly authorized to do so on behalf of the respective project participant.

The corporate identity of all project participants and focal points is included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.

TÜV NORD confirmed that the MoC statement complies with all relevant forms and that it is in line with the requirements stipulated in paragraph 72 of *Clean Development Mechanism Project Standard* (ver. 02.1 Annex 2 EB 70)^{/PS/} and paragraph 59 to 61 of Validation and Verification Standard (ver. 03.0 Annex 3 EB 70)^{/VVS/}.

5.9 Project Documentation Editorial Aspects

The PoA-DD is using CDM-SSC-PoA-DD template version 02 and generic CPA-DD is using CDM-SSC-CPA template version 02. They are in compliance with the latest PoA-DD and CPA-DD templates and guidelines.

6 VALIDATION OPINION

Beijing Huayu Xinda Consultation Co., Ltd. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the programme of activities (PoA): “Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province” with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board.

In the course of the validation 10 Corrective Action Requests (CARs) and 1 Clarification Requests (CLs) were raised and all have been successfully closed.

The review of the PoA design documentations and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The PoA is in line with all relevant host country criteria (China) and all relevant UNFCCC requirements for CDM. PoA approvals have been obtained from DNA of China vide the Letter of Approval (HCA) dated November, 2012 (No. 4826).
- The PoA additionality is sufficiently justified in the PoA-DD.
- The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.
- The monitoring plan is transparent and adequate.
- The calculation of the PoA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 38,820 t CO_{2e} are most likely to be achieved within the fixed crediting period.
- All information has been consistently applied in the generic CPA-DD form.

The conclusions of this report show, that the PoA, as it was described in the project documentations, is in line with all criteria applicable for the validation.

Shanghai, 2012-12-21



Yu Wei Ming
TÜV NORD JI/CDM CP
Validation Team Leader

Essen, 2012-12-21



Schubert, Jochen
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/AFSR/	Approval of Feasibility Study dated April 30 th , 2011 (Wan Fa Gai Nong Jing [2011] No.311)
/BL/	Business License of Beijing Huayu Xinda Consultation Co., Ltd. from Jun.7 th , 2011 to Jun 6 th , 2031
/CDMA/	CDM Project Cooperation Agreement between Hefei Qianxishanzhuang Farming Ecological Garden Co., Ltd. and Beijing Huayu Xinda Consultation Co.,Ltd dated Jan.10 th , 2012
/CLV/	Confirmation Letter by the CME (Voluntary Action) dated June 5 th , 2012
/EIAT/	Environment Impact Assessment Registration Table and the approval dated Oct. 14 th , 2010.
/FSR/	Feasibility Study of Biogas Engineering Project of Qianxishanzhuang Agricultural Ecological Garden Co., Ltd. in Hefei dated Oct. 2010
/HCA/	Host Country Letter of Approval from the DNA of China dated Nov. 2012 (No. 4826)
/ICC/	Installed capacity calculation
/IRR/	IRR calculation sheet
/MM/	Management and Monitoring Manual dated Nov. 22 nd , 2012 (version 1.0)
/MOC/	Modalities of Communication
/OC/	Organization Chart on the office of Qianxishanzhuang Agricultural Ecological Garden Co., Ltd.
/PoA-DD/	Project Design Document named “Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province” Version 02, dated 2012-12-20
/PSD/	Evidence of Project starting date: Construction Contract dated Sep 3 th , 2012;

Reference	Document
	Generator Purchase Contract dated Sep. 27 th , 2012
/rcCPA-DD/	Real Case CPA-Design Document named “Animal Manure Treatment Programme in Anhui Province, Jiangsu Province and Yunnan Province--CPA0001” Version 02 dated 2012-12-20
/SHCP/	Stakeholder consultation process evidence including photos and bulletins
/XLS/	Emission reduction calculation spreadsheet

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMS-III.AO/	Methane recovery through controlled anaerobic digestion ver. 01
/AMS-III.D./	Methane recovery in animal manure management systems ver.18.0
/AMS-I.C./	Thermal energy production with or without electricity ver.19.0
/AMS-I.D./	Grid Connected renewable electricity generation ver.17.0
/AMS-I.F./	Renewable electricity generation for captive use and mini-grid ver.2.0
/EIAL/	Law of the People’s Republic of China on Environmental Impact Assessment (President Decree No.77), issued by the president of P.R. China on 28 October 2002 and into force on 2003-09-01.. http://www.gov.cn/gongbao/content/2002/content_61822.htm
/GSP/	UNFCCC website: Global Stakeholder Consultation Process for the PoA in the period of <14/06/2012> to <13/07/2012> and no comment is received. http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/B89Z68MKCUBD4ADJ9H9BLFDQ6WP05T/view.html
/IPCC/	<ul style="list-style-type: none"> • IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000 • Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual

Reference	Document
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/MOCP/	Procedures for modalities of communication between project participants and the executive board (version 01, EB 45 Annex 59)
/PCP/	Clean development mechanism project cycle procedure (ver. 03.1, EB 70 Annex 4)
/PoA-DDs-T/	<p>CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form (version 02.0, EB 67 Annex 30)</p> <p>CDM-SSC-CPA-DD -Small-Scale CDM Component Programme Activity Design Document form (version 01, EB 66 Annex 17)</p>
/POAR/	<p>PoA related rules:</p> <ol style="list-style-type: none"> 1. “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” (current version 04.1, EB 55 Annex 38) (the “PoA Procedures”); 2. <i>Clarifications regarding the “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”</i> (Ver. 01, EB 60 Annex 26). 3. “Procedures for review of erroneous inclusion of a CPA” (current version 02, EB 55 Annex 37) (the “CPA Review Procedures”) 4. Guidance for determining the occurrence of de-bundling under a programme of activities (PoA) (version 03, EB54 Annex 13) 5. Guidelines for demonstrating additionality of microscale project activities (version 04, EB 68 Annex 26) 6. Implementation plan for standards for programme of activities (version 01.0, EB 64 Annex 2) 7. Standard for sampling and surveys for CDM project activities and programme of activities (version 03.0, EB 69 Annex 4) 8. Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 02.0, EB70 Annex 5)
/PS/	Clean Development Mechanism Project Standard ver. 02.1, EB70 Annex 2
/STANDR/	<ol style="list-style-type: none"> 1. NY/T 1220.1-2006 ‘Technical code for biogas engineering-Part 1: Process design’ 2. NY/T 1220.2-2006 ‘Technical code for biogas engineering-Part 2: Design of biogas supply’

Reference	Document
	3. NY/T 1220.3-2006 'Technical code for biogas engineering-Part 3: Construction and acceptance' 4. NY/T 1220.4-2006 'Technical code for biogas engineering-Part 4: Operation and maintenance' 5. NY/T 1220.5-2006 'Technical code for biogas engineering-Part 5: Evaluation of quality' 6. NY/T 1221-2006 'Technical specification for operation maintenance and safety of biogas plant in scale animal and poultry farms' 7. NY/T 1222-2006 'Criteria for designing of biogas plant in scale animal and poultry breeding farms' 8. NY/T 1223-2006 'Biogas-powered generating sets' 9. GB/T 3606-2001 National Standards of China for Domestic Biogas Stove 10. DL/T448-2000 Technical Administrative Code of Electric Energy Metering
/TA/	Tool for the demonstration and assessment of additionality (Ver. 06.0.0).
/Tier2/	Tier 2 approach to estimate CH ₄ emissions from manure management, Chapter 10 "Emissions from Livestock and Manure Management", under the volume 4 "Agriculture, Forestry and Other Land Use" of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories"
/TO/	Tool to calculate the emission factor for an electricity system (Ver. 02.2.1); Tool to determine project emissions from flaring gases containing methane (Ver. 01);
/VVS/	Validation and Verification Standard (Version 03.0, EB 70, Annex 3)

Table 7-3: Websites used

Reference	Link	Organisation
/dna/	http://cdm.ccchina.gov.cn/web/site/CDM/pdf/Item_new/Item_new9985.pdf	DNA webpage of Host Country
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications

Reference	Link	Organisation
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/ /IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Gao Yunlong	Beijing Huayu Xinda Consultation Co., Ltd.
/IM01/ /IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Ren Luyang	Beijing Huayu Xinda Consultation Co., Ltd.
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Chen Jinghong	Rural Energy Office of Anhui Province, Director
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhang Le	Development and Renovation Committee of Anhui Province
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Wu Jixiang	Rural Committee of Feixi County
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhou Zhabin	Environmental Bureau of Feixi County
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Liu Xuesong	Hefei City Qianxishanzhuang Agricultural Ecological Garden Co., Ltd.
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zou Bihong	Rural Energy Office of Feixi County
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhu Hairui	Hefei City Qianxishanzhuang Agricultural Ecological Garden Co., Ltd.
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Liu Jiquan	Farmer from neighbourhood (Nantang Village)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Liu Jiming	Farmer from neighbourhood (Nantang Village)

Reference	Mol ¹		Name	Organisation / Function
/IM03/	T	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Song Liangcai	Rural Committee of Jiangsu Province, the Department of Environment and Resources
/IM03/	T	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Teng Kunchen	Environment Bureau of Nanjing
/IM03/	T	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Liu Jianghua	Rural Committee of Yunnan Province, Rural Energy Office
/IM03/	T	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Wang Jian	Rural Bureau of Kunming City
/IM03/	T	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Cun Wenjuan	Development and Renovation Committee of Jiangsu Province, the Department of Environment and Resources

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Applicability Criteria
- A3:** Assessment of Baseline Identification
- A4:** Assessment of Financial Parameters
- A5:** Assessment of Barrier analysis
- A6:** Outcome of the GSCP
- A7:** Eligibility Criteria Assessment
- A8:** Statement of competence of involved Personnel

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Programme Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
A. General Description of the Programme of Activities				
A.1. Technology to be employed <i>Validation of programme technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i>				
<p>A.1.1. Does the PoA-DD contain a clear, accurate and complete PoA description?</p> <p>(VVS, v. 3.0, §§ 64, 69)</p> <p><i>The PoA-DD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the programme activity and the technical aspects of its implementation.</i></p> <p><i>Pl. consider esp. chapters A.2, A.6 (in case of LSC) for assessment.</i></p> <p><i>§69 (a) Describe the process undertaken to validate the accuracy and completeness of the programme description.</i></p> <p><i>§69 (b) Contain the DOE's opinion on the accuracy and</i></p>	<p>/PoA-DD/ /STANDR/ /PoAR/</p>	<p><i>Description:</i> The PoA-DD contains a general description of its stated goal, implementation framework, sustainability contribution, technologies/measures etc. in Section A.2. It could be implied that by the implementation of PoA, it is possible to promote the introduction of biogas system to livestock farmers in Anhui, Jiangsu and Yunnan province. However, EB 67 annex 30 requires "Policy/measure or stated goal that the PoA seeks to promote", which is lacking in section A.2.</p> <p><i>Validator's action:</i> The description in the PoA-DD was checked and the first CPA was sighted. In addition, the stakeholders, especially the governments of three provinces and the farm owner were interviewed. .</p> <p><i>Conclusion:</i> CAR PoA-A1 was raised.</p>	CAR PoA-A1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>completeness of the programme description.</i>				
A.1.2. Does the PoA-DD contain a clear, accurate and complete definition (including measures/technology(ies) to be employed) of a CPA under the PoA? (VVS, v. 3.0, § 189)	/PoA-DD/ /STANDARD/	<i>Description:</i> The PoA-DD covers anaerobic manure treatment systems with biogas recovery and the use of biogas as fuel for energy generation. However, the national technical standards with which activities in PoA should comply are missing. <i>Validator's action:</i> By means of document review, like POA-DD. <i>Conclusion:</i> CAR PoA-A1 was raised.	CAR PoA- A1	OK
A.1.3. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the PoA and the CPAs will be implemented acc to the descriptions in the PoA-DD and the CPA-DD?	/PoA-DD/ /IM03/	<i>Description:</i> During the stakeholder meeting, the government officers were interviewed to confirm the requirement of the construction of biogas system in livestock farm and their willingness to support such programme. During the on-site visit, the open lagoon of animal manure was sighted and its negative impact to the farm owner, surrounding residents and environment were well investigated. <i>Validator's action:</i> By means of on-site visit and cross checking the POA-DD. <i>Conclusion:</i> The description is in accordance with the real situation or it is most likely that the PoA and the CPAs will be implemented acc to the descriptions in the PoA-DD and the CPA-DD.	OK	OK
A.1.4. In case the programme involves alteration of an existing installation or process, is a clear description available regarding the differences between the programme and the pre-programme situation? (VVS, v. 3.0, § 68) <i>Describe the steps taken to validate this issue.</i>	/PoA-DD/ /IM03/	<i>Description:</i> It cannot be ensured that only new digesters will be installed and no alteration of existing equipment will be involved hasn't been provided. <i>Validator's action:</i> By means of document review, like POA-DD. <i>Conclusion:</i> CAR PoA-A1 was raised.	CAR PoA- A1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
A.1.5. Has a sufficient description of the general operating and implementing framework of the PoA and its CPAs been given? (VVS, v.3.0, §189)	/PoA-DD/ /CDMA/ /	<i>Description:</i> The presented description does not sufficiently explain the functions of all the entities involved. <i>Validator's action:</i> By means of document review, like POA-DD, and on-site visit. <i>Conclusion:</i> CAR PoA-A1 was raised.	CAR PoA-A1	OK
A.2. Small scale project activity <i>It is assessed whether the project qualifies as small-scale CDM PoA</i>				
A.2.1. Does the programme fall within the small scale project activity threshold and applies a large-scale approved methodology? In this case, are the modalities and procedures for large-scale project activities followed? (VVS, v. 3.0, § 151)	/PoA-DD/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> The programme falls within the small scale project activity threshold, which is defined by the eligibility criteria. And four small-scale approved methodologies are applied. No large-scale approved methodology is applied. <i>Validator's action:</i> By means of document review, like POA-DD, and check of UNFCCC website. <i>Conclusion:</i> There is no large-scale approved methodology and this requirement is deemed fulfilled.	OK	OK
In case of project activities applying a LSC-Methodology, go to B.1				
A.2.2. Does the programme qualify as a small scale	/PoA-	<i>Description:</i> According to EB69. Annex 27 'General guidelines to	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>PoA as defined in decision 4 / CMP.1 annex II?</p> <p>(VVS, v. 3.0, §§ 150–152)</p> <p><i>Please indicate whether the CPAs meet the eligibility criteria for small scale-projects. Especially consider whether the CPAs qualify within the thresholds of the three possible types of small-scale project activities</i></p>	DD/ /PoAR/	<p>SSC CDM methodologies' (version 19), the eligibilities of project activities as small-scale CDM project activities are defined as</p> <ul style="list-style-type: none"> - For Type I: project participants shall provide proof that the installed capacity of the proposed project activity will not increase beyond 15 megawatt (MW), equivalent to 45 MW thermal output of the equipment or the plant. - For Type III: project participants shall provide an estimation of emission reductions by the project activity over the crediting period and proof that the emission reductions of every year will not go beyond the limits of 60 ktCO₂e/y. <p>In Section B.2., the eligibility criteria No. 3 is defined as 'The emission reductions from type III components of the CPA should be equal to or less than 60,000 tCO₂/y and the total installed/rated/added energy generation capacity of the CPA should be equal to or less than 45 MW_{ther}', which fulfils the definition in the guideline.</p> <p><i>Validator's action:</i> By means of document review, like POA-DD.</p> <p><i>Conclusion:</i> The programme qualifies as a small scale PoA</p>		
<p>A.2.3. Does the PoA make provisions for each CPA not to exceed the applicable threshold throughout the crediting period?</p> <p>(EB 70, Annex 5, §16 (k))</p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> There is no provision to ensure each CPA not to exceed the applicable threshold throughout the crediting period.</p> <p><i>Validator's action:</i> By means of document review, like POA-DD.</p> <p><i>Conclusion:</i> CAR PoA-A1 was raised.</p>	CAR PoA-A1	OK
<p>A.2.4. Are possible cross effects between CPAs (when applying multiple small scale methodologies) taken into account appropriately?</p> <p>(EB 70, Annex 5, §30)</p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> According to EB 70, Annex 5, §30, 'Combinations of technologies/measures and/or methodologies for a PoA are eligible where it is demonstrated that there are no cross effects between the technologies/measures applied.' Multiple small scale methodologies are applied in all CPAs. The justification for the cross effects of multiple small scale methodologies is provided in Section B.2 of Part</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		II. <i>Validator's action:</i> By means of document review, like POA-DD and checking the UN regulations. <i>Conclusion:</i> There are no cross-effects.		
A.2.5. Does the programme apply one of the approved small scale categories and any methodology(ies) and tool(s) referred therein? (VVS, v. 3.0., § 152 (b)) <i>Check, if applicable the expiry dates of the applied methodology(ies). Further, take into consideration the general guidance to the methodologies¹, which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i>	/PoA-DD/ /PoAR/	<i>Description:</i> In Section B.3. four small scale methodologies are quoted as: - AMS- III.D. ver.18.0 - AMS-I.C. ver.19.0 - AMS-I.D. ver.17. - AMS-I.F. ver.2. Also, the tools referred therein are quoted. However, there is reference and website referred expired. <i>Validator's action:</i> By means of document review and UNFCCC website check. <i>Conclusion:</i> CL PoA-A1 was raised and correction is necessary.	CAR PoA- A1	OK
A.2.6. Are the small scale CPAs not debundled components of a larger project activity? (VVS, v. 3.0, §203 and EB 70, Annex 5, § 16 (I)) <i>Describe the steps taken to assess whether the CPA is not a debundled component of a large scale activity, in accordance to the "Guidelines on assessment of debundling for SSC project activities".</i>	/PoA-DD/ /PoAR/	<i>Description:</i> In section B.2. the eligibility criteria No.4 is described as 'The proposed small-scale CPA is not a debundled component of a large scale activity' and in section C, 'The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity' is included in the management system. However, the requirements for the debundling check is not include in the eligibility criteria as required by EB 70, Annex 5, § 16(I) <i>Validator's action:</i> By means of document review.	CAR PoA- A1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.								
<i>In case 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 methodology (i.e. 150kW, 0.6 GWh, 0.6 ktCO₂e), then that CPA of the PoA is exempted from the de-bundling check, i.e. is considered as not being a debundled component of a large-scale activity</i>		<i>Conclusion:</i> CAR PoA-A1 was raised and correction is necessary.										
A.3. Definition of a typical Component Project Activity (CPA) <i>The description of a typical CPA is assessed. The eligibility criteria shall be checked for appropriateness and completeness.</i>												
A.3.1. Has the POA-DD unambiguously defined a CDM programme activity (CPA) under the PoA?	/PoA-DD/	<div><div><i>Description:</i> In PART II. Generic component project activity (CPA), the PoA-DD unambiguously has defined a CPA under the PoA. As four scenarios are introduced for thermal and electrical energy generation involved in the PoA, the description of generic CPA is provide in the Section A.1 for each scenario.</div><table><tr><th>Scenario</th><th>Typical CPA</th></tr><tr><td>I</td><td>Recovered biogas will be utilized to thermal generation which could satisfy the heat demand of livestock farm and/or nearby residents.</td></tr><tr><td>II</td><td>Recovered biogas will be utilized to electricity generation which will be used for captive use.</td></tr><tr><td>III</td><td>Recovered biogas will be utilized for thermal generation supplied to the livestock farm and/or nearby residents and power generation for captive use.</td></tr></table></div>	Scenario	Typical CPA	I	Recovered biogas will be utilized to thermal generation which could satisfy the heat demand of livestock farm and/or nearby residents.	II	Recovered biogas will be utilized to electricity generation which will be used for captive use.	III	Recovered biogas will be utilized for thermal generation supplied to the livestock farm and/or nearby residents and power generation for captive use.	OK	OK
Scenario	Typical CPA											
I	Recovered biogas will be utilized to thermal generation which could satisfy the heat demand of livestock farm and/or nearby residents.											
II	Recovered biogas will be utilized to electricity generation which will be used for captive use.											
III	Recovered biogas will be utilized for thermal generation supplied to the livestock farm and/or nearby residents and power generation for captive use.											

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.															
		<table><tr><td>IV</td><td>Recovered biogas will be utilized to electricity generation which will be delivered to the power grid.</td></tr></table> <p><i>Validator's action:</i> By means of document check and on-site visit</p> <p><i>Conclusion:</i> The description is deemed sufficient.</p>	IV	Recovered biogas will be utilized to electricity generation which will be delivered to the power grid.															
IV	Recovered biogas will be utilized to electricity generation which will be delivered to the power grid.																		
A.3.2. Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used? <i>The PoA-DD shall contain a clear description of a typical CPA which provides the reader with a clear understanding of the precise nature of the project activity and the technology / measure to be used.</i> <i>Describe the process undertaken to validate the accuracy and completeness of the CPA description.</i>	/PoA-DD/ /IM03/	<p><i>Description:</i> The PoA-DD covers anaerobic manure treatment systems with biogas recovery and the use of biogas as fuel for energy generation. However, the national technical standards with which activities in PoA should comply are missing and the energy generation is stated too general.</p> <p><i>Validator's action:</i> By means of document review, like POA-DD.</p> <p><i>Conclusion:</i> CAR PoA-A1 was raised.</p>	CAR PoA-A1	OK															
A.3.3. Is all necessary information consistent between the finalized PoA-DD and the Generic CPA-DD?	/PoA-DD/	<p><i>Description:</i></p> <p>The Consistency of Generic CPA and PoA is compared as following:</p> <table><tr><th>PART II Generic Component project activity</th><th>Part I Programme of activities</th><th>Consistency</th></tr><tr><td>A.1</td><td>A.2</td><td><input type="checkbox"/> Consistent</td></tr><tr><td>B.1</td><td>B.3</td><td><input type="checkbox"/> Consistent</td></tr><tr><td>B.2</td><td>B.3</td><td><input type="checkbox"/> Consistent</td></tr><tr><td>B.5</td><td>B.2</td><td><input type="checkbox"/> Consistent</td></tr></table>	PART II Generic Component project activity	Part I Programme of activities	Consistency	A.1	A.2	<input type="checkbox"/> Consistent	B.1	B.3	<input type="checkbox"/> Consistent	B.2	B.3	<input type="checkbox"/> Consistent	B.5	B.2	<input type="checkbox"/> Consistent	Pending 9	OK
PART II Generic Component project activity	Part I Programme of activities	Consistency																	
A.1	A.2	<input type="checkbox"/> Consistent																	
B.1	B.3	<input type="checkbox"/> Consistent																	
B.2	B.3	<input type="checkbox"/> Consistent																	
B.5	B.2	<input type="checkbox"/> Consistent																	

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		The description in the POA-DD is not complete. <i>Validator's action:</i> By means of document check, like POA-DD. <i>Conclusion:</i> CAR PoA-A1 was raised.		
A.3.4. Does the generic CDM-CPA-DD include Name/contact details of the entity/individual responsible for the operation of the CPA?	/PoA-DD/	<i>Description</i> Contact information on entity/individual responsible for the PoA are included in the Appendix 1. <i>Validator's action:</i> The PoA-DD has been checked against the guideline. <i>Conclusion:</i> The description is deemed sufficient.	OK	OK
A.3.5. Does the definition of eligibility criteria for inclusion of a CPA under the PoA include the following information: i) appropriate criteria for demonstration of additionality of the CPA, and ii) all type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility? (EB 70, Annex 5, §§ 8,9,10,11,12,13,14,15,16) <i>Assess the specified eligibility criteria in the POA-DD in order to determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements shall include, inter alia,</i>	/PoA-DD/ /PoAR/	<i>Description:</i> <input type="checkbox"/> All eligibility criteria have been clearly described, esp. w.r.t. the following points, and detailed assessments are included in Annex 7 of this report: <ol style="list-style-type: none"> (1) Geographical requirement of the CPA boundary (2) Confirmation of no double-counting (3) Technical requirement of the CPA, including procurement (4) CPA start date not before PoA webhosting date (5) Methodology applicability requirement of the CPA (6) Other methodological / tool requirement of the CPA, (7) The additionality assessment criteria for each CPA are met (8) Local stakeholder consultation prior to inclusion of the CPA (9) Environmental analysis requirement of the CPA (10) Public funding requirement of the CPA (11) CPA crediting period not exceed the PoA end date (12) Monitoring requirement of the CPA (13) The CPA shall be approved by the coordinating entity If applicable: <ol style="list-style-type: none"> (14) Target group and distribution mechanism requirement 	CAR PoA- A2	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> the means of demonstrating the additionality of the CPA and the applicability of the applied methodology. <p>The eligibility criteria represents an essential element of ensuring the smooth functioning of programmatic CDM, therefore the validation team may raise CARs which ensure the ease of application of the eligibility criteria. (EB 70 annex 5 para 16 Footnote 2).</p> <p>Detailed assessment on the final criteria are included in the dedicated Annex A-6 of this report.</p>		<p>(15) Sampling requirements of the CPAs in accordance with the applicable guidelines by the EB</p> <p>(16) Requirements/Provisions for meeting threshold criteria on CPA level (SSC, Microscale)</p> <p>(17) De-bundling criterion for the CPA</p> <p>(18) Other eligibility criteria applicable for CPA implementation</p> <p><input checked="" type="checkbox"/> Not all eligibility criteria have been clearly described and following findings have been raised accordingly (after successful closure of all the findings, detailed assessments are to be included in Annex 7 of the final report):</p> <ul style="list-style-type: none"> How to 'assess the inclusion of CPAs' of each criteria and how to make the criteria verifiable is not clear. Whether the CPA shall be approved by the coordinating and management entity is not clear <p>Validator's action: The PoA-DD has been checked against the guidelines.</p> <p>Conclusion: CAR PoA-A2 was raised.</p>		
<p>A.3.6. Are the eligibility criteria defined verifiable, sufficiently objective and do allow to assess the inclusion of CPAs in the PoA?</p> <p>(EB 70, Annex 5, §§ 17,18)</p>	/PoA-DD/ /PoAR/	<p>Description: The eligibility criteria are defined in Section B.2. However, how to 'assess the inclusion of CPAs' of each criteria and how to make the criteria verifiable is missing.</p> <p>Validator's action: The PoA-DD has been checked and the CME was interviewed during the on-site visit.</p> <p>Conclusion: CAR PoA-A2 was raised.</p>	CAR PoA- A2	OK
<p>A.3.7. In case of combination of technologies/measures and or methodologies: have distinct eligibility criteria been developed</p>	/PoA-DD/ /PoAR/	<p>Description: According to EB 70, Annex 5, §§ 14, for PoAs that include combinations of technologies/measures and/or methodologies, distinct eligibility criteria shall be developed per combination as specified in paragraph 31(a) to 31(d). There are four</p>	CAR PoA-	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.										
for each type of CPA? (EB 70, Annex 5, §§ 22,31)		kinds of combination in this PoA. However, the criteria are not provided separately in Section B.2. <i>Validator's action:</i> The PoA-DD has been checked against the guidelines. <i>Conclusion:</i> CAR PoA-A2 was raised.	A2											
A.3.8. In case of combination of technologies/measures and or methodologies: have provisions been made to ensure the compliance of a CPA using technologies/measures from several methodologies with all the eligibility criteria derived from the requirements of all the methodologies and are those described in the PoA-DD? (EB 70, Annex 5, §§ 29)	/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> The methodology combination in this PoA is defined as following: <table><tr><th>Scenario</th><th>Methodology Combination</th></tr><tr><td>I</td><td>AMS-III.D.+ AMS-I.C.</td></tr><tr><td>II</td><td>AMS-III.D+ AMS-I.F.</td></tr><tr><td>III</td><td>AMS-III.D+ AMS-I.F.+AMS-I.C.</td></tr><tr><td>IV</td><td>AMS-III.D+ AMS-I.D.</td></tr></table> <i>The eligibility criteria derived from the requirement of methodologies are described in each scenario.</i> <i>Validator's action:</i> The PoA-DD has been checked against the guidelines. <i>Conclusion:</i> Requirements are fulfilled.	Scenario	Methodology Combination	I	AMS-III.D.+ AMS-I.C.	II	AMS-III.D+ AMS-I.F.	III	AMS-III.D+ AMS-I.F.+AMS-I.C.	IV	AMS-III.D+ AMS-I.D.	OK	OK
Scenario	Methodology Combination													
I	AMS-III.D.+ AMS-I.C.													
II	AMS-III.D+ AMS-I.F.													
III	AMS-III.D+ AMS-I.F.+AMS-I.C.													
IV	AMS-III.D+ AMS-I.D.													
B. Project Baseline, Additionality and Monitoring Plan														

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.1. Reference of the Methodology				
B.1.1. Do the PoA-DD and the generic CPA-DD correctly quote an applicable version of the methodology? (VVS, v. 3.0, § 74)	/PoA-DD/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<input checked="" type="checkbox"/> The applied methodologies are correctly quoted and identical to the version available on the UNFCCC website. <input checked="" type="checkbox"/> The applied versions of the baseline and monitoring methodologies are applicable and valid at the time of submission for stakeholder consultation.	OK	OK
B.2. Applicability of the Methodology				
B.2.1. Does the programme apply (an) PoA-approved and applicable CDM methodology(ies) and (a) valid version(s) thereof? (VVS, v. 3.0, §§ 70, 74, 76, 77) <i>Describe the steps taken to validate this issue.</i> <i>Describe for each applicability criterion listed in the selected approved methodology the steps taken to assess its fulfilment</i>	/PoA-DD/ /AMS-III.D./ /AMS-I.C./ /AMS-	<input checked="" type="checkbox"/> The applied methodologies are correctly quoted and identical to the version available on the UNFCCC Website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is valid at the time of submission for stakeholder consultation. <input checked="" type="checkbox"/> All applicability criteria in the methodology, the applied tools or any other methodology component referred to	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
	I.D./ /AMS- I.F./	therein are fulfilled (please make detailed assessment in Annex 2 of this protocol).		
B.2.2. In case of multiple methodologies: do the PoA-DD and the generic CPA-DD list all combinations of technologies/measures and/or approved methodologies that will be implemented in the PoA and define separate eligibility criteria for each of them? (EB70, Annex 5, §28)	/PoA-DD//A MS- III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> Four methodologies and four combinations will be implemented in the PoA-DD. The methodologies and combinations are all listed. However, the separate eligibility criteria are missing. <i>Validator's action:</i> The PoA-DD has been checked against the guidelines. <i>Conclusion:</i> CAR PoA-A2 was raised.	CAR PoA- A2	OK
B.2.3. In case of multiple methodologies: is the combination of technologies/measures and/or methodologies approved? (EB 70, Annex 5, §§31,32,34,35)	/PoA-DD//A MS- III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> The methodology AMS-III.D is selected as the principle technology/measure that applied consistently in each CPA using multiple combinations of methodologies. It is in accordance with EB 70, Annex 5, §§31(c) and footnote of this item as 'Biogas/methane recovery from an anaerobic digester is the principle technology/measure in this example.' <i>Validator's action:</i> The PoA-DD has been checked against the guidelines. <i>Conclusion:</i> The combination of technologies/measures and applied methodologies are approved.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.2.4. In case one or more applicability criteria of the methodology(ies) have not been met, has the validation team requested clarification to, revision of or deviation from the methodology(ies) in accordance with the latest guidelines? (VVS, v. 3.0, §§ 78-81)	/PoA-DD/	<p><i>Description:</i> All applicability criteria have been met.</p> <p><i>Validator's action:</i> The PoA-DD has been checked against the guidelines.</p> <p><i>Conclusion:</i> All applicability criteria have been met.</p>	OK	OK
B.3. PoA and CPA Boundaries <i>Project Boundaries are the limits and borders defining the GHG emission reduction programme</i>				
B.3.1. Are the PoA's spatial boundaries (geographical) within which all CPAs included in the PoA will be implemented clearly defined? (VVS, v. 3.0, §§ 72 (a), 82, 191) <i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	/PoA-DD//IM 03/	<p><i>Description:</i> According to LoA from all three provinces, the project will be implemented in Anhui, Jiangsu and Yunnan province. The spatial boundaries are demonstrated in Section.A.5. However, according to EB67 Annex 30 Section B.3 of Part II.' Include in the flow diagram all the equipment, systems and flows of mass and energy described in that section. In particular, indicate in the diagram the emissions sources and GHGs included in the project boundary and the data and parameters to be monitored.' Certain elements are missing in the technology diagram according to the guidance.</p> <p><i>Validator's action:</i> The PoA-DD has been checked against the guidelines. The HCA has been checked and the administrative area has been researched online.</p> <p>.</p> <p><i>Conclusion:</i> PoA CL-B1 was raised.</p>	PeA CAR-B4	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.																																								
<p>B.3.2. Are all sources and GHGs included in the PoA/CPA boundary as required in the applied methodology?</p> <p>(VVS, v. 3.0, §§ 82, 84)</p> <p><i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i></p>	<p>/PoA-DD/ /IM03/</p>	<p><i>Description:</i></p> <table><tr><th colspan="3">Scenario I</th></tr><tr><th></th><th>source</th><th>gas</th></tr><tr><td rowspan="2">Baseline</td><td>Treatment of manure and wastes from agricultural activities</td><td>CH₄</td></tr><tr><td>Thermal generation</td><td>CO₂</td></tr><tr><td rowspan="5">Project activity</td><td>Physical leakage of biogas digesters</td><td>CH₄</td></tr><tr><td>Flaring or combustion of the gas stream</td><td>CH₄</td></tr><tr><td>The use of fossil fuel or electricity</td><td>CO₂</td></tr><tr><td>Incremental transportation distance</td><td>CO₂</td></tr><tr><td>Storage of manure before fed into the anaerobic digester</td><td>CH₄</td></tr></table> <table><tr><th colspan="3">Scenario II</th></tr><tr><th></th><th>source</th><th>gas</th></tr><tr><td rowspan="2">Baseline</td><td>Treatment of manure and wastes from agricultural activities</td><td>CH₄</td></tr><tr><td>Electricity generation</td><td>CO₂</td></tr><tr><td rowspan="3">Project activity</td><td>Physical leakage of biogas digesters</td><td>CH₄</td></tr><tr><td>Flaring or combustion of the gas stream</td><td>CH₄</td></tr><tr><td>The use of fossil fuel or electricity</td><td>CO₂</td></tr></table>	Scenario I				source	gas	Baseline	Treatment of manure and wastes from agricultural activities	CH ₄	Thermal generation	CO ₂	Project activity	Physical leakage of biogas digesters	CH ₄	Flaring or combustion of the gas stream	CH ₄	The use of fossil fuel or electricity	CO ₂	Incremental transportation distance	CO ₂	Storage of manure before fed into the anaerobic digester	CH ₄	Scenario II				source	gas	Baseline	Treatment of manure and wastes from agricultural activities	CH ₄	Electricity generation	CO ₂	Project activity	Physical leakage of biogas digesters	CH ₄	Flaring or combustion of the gas stream	CH ₄	The use of fossil fuel or electricity	CO ₂	<p>PoA CAR- B4</p>	<p>OK</p>
Scenario I																																												
	source	gas																																										
Baseline	Treatment of manure and wastes from agricultural activities	CH ₄																																										
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Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)		Draft Concl.	Final Concl.	
			Incremental transportation distance	CO ₂		
			Storage of manure before fed into the anaerobic digester	CH ₄		
		Scenario III				
			source	gas		
		Baseline	Treatment of manure and wastes from agricultural activities	CH ₄		
			Electricity generation	CO ₂		
			Thermal generation	CO ₂		
		Project activity	Physical leakage of biogas digesters	CH ₄		
			Flaring or combustion of the gas stream	CH ₄		
			The use of fossil fuel or electricity	CO ₂		
			Incremental transportation distance	CO ₂		
			Storage of manure before fed into the anaerobic digester	CH ₄		
		Scenario IV				
			source	gas		
		Baseline	Treatment of manure and wastes from agricultural activities	CH ₄		
			Electricity generation	CO ₂		

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.											
		<table><tr><td rowspan="5">Project activity</td><td>Physical leakage of biogas digesters</td><td>CH₄</td></tr><tr><td>Flaring or combustion of the gas stream</td><td>CH₄</td></tr><tr><td>The use of fossil fuel or electricity</td><td>CO₂</td></tr><tr><td>Incremental transportation distance</td><td>CO₂</td></tr><tr><td>Storage of manure before fed into the anaerobic digester</td><td>CH₄</td></tr></table> <p>However, in figure 4, figure 7, figure 10, figure 13, the legend is not clear.</p> <p><i>Validator's action:</i> The PoA DD has been checked against methodologies.</p> <p><i>Conclusion:</i> PoA CAR-B1 was raised.</p>	Project activity	Physical leakage of biogas digesters	CH ₄	Flaring or combustion of the gas stream	CH ₄	The use of fossil fuel or electricity	CO ₂	Incremental transportation distance	CO ₂	Storage of manure before fed into the anaerobic digester	CH ₄		
Project activity	Physical leakage of biogas digesters	CH ₄													
	Flaring or combustion of the gas stream	CH ₄													
	The use of fossil fuel or electricity	CO ₂													
	Incremental transportation distance	CO ₂													
	Storage of manure before fed into the anaerobic digester	CH ₄													
<p>B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?</p> <p>(VVS, v. 3.0, §§ 84, 87)</p> <p><i>Confirm if the adequacy provided by the PPs is reasonable, based on assessment of supporting documented evidence provided by the PPs or by onsite observations.</i></p>	<p>/PoA-DD/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./</p>	<p><i>Description:</i> The applied methodologies do not allow choosing. Not applicable as there is not this kind of requirement in AMS- III.D. ver.18.0, AMS-I.C. ver.19.0, AMS-I.D. ver.17.0, AMS-I.F. ver.2.0</p> <p><i>Validator's action:</i> The methodologies are checked</p> <p><i>Conclusion:</i> The applied methodologies do not allow choosing whether a source and/or gas needs to be included.</p>	N/A	N/A											
<p>B.3.4. Are provisions in place in case the implementation of a CPA might lead to</p>	<p>/PoA-DD/</p>	<p><i>Description:</i> Additional GHG emissions within the boundary, which are expected to contribute more than 1% of the overall expected</p>	OK	OK											

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>emissions contributing more than 1% of the overall expected average annual emissions reductions within the project boundary and which are not addressed by the selected approved methodology?</p> <p>(VVS, v. 3.0, § 87)</p> <p><i>Describe the steps taken to validate this issue. If any emission sources that are expected to contribute more than 1% have been identified, the DOE shall request clarification of, revision to, or deviation from the methodology, as appropriate.</i></p>	/IM03/	<p>average annual emission reductions and which are not addressed by the methodologies are not caused by the implementation of the PoA.</p> <p><i>Validator's action:</i> During on-site visit and local stakeholders' interview, the potential such sources of GHG emissions were not observed.</p> <p><i>Conclusion:</i> No further GHG emissions are expected.</p>		
<p>B.4. Baseline Identification</p> <p><i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i></p>				
<p>B.4.1. Has the baseline scenario been determined according to the methodology?</p> <p>(VVS, v. 3.0, §§ 72 (b), 89, 87(e))</p> <p><i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.</i></p>	<p>/PoA-DD/ /AMS-III.D./ /AMS-I.C./</p>	<p><input checked="" type="checkbox"/> The baseline is defined by the applied methodologies and the PoA-DD refers to it. If the answer is Yes, continue to B.4.5</p> <p><input type="checkbox"/> The baseline is not directly defined by the applied methodologies.</p> <p>For details of the assessment regarding the evaluation of the</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
	/AMS-I.D./ /AMS-I.F./	baseline scenario pl. refer to table A-2. <input checked="" type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodologies. <input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:		
B.4.2. Is the list of alternatives complete? (VVS, v. 3.0, § 90) <i>Describe how it was validated that all alternatives are plausible and that any scenarios that are supplementary to those required by the methodology are realistic and credible in the context of the project activity and that no alternative scenarios have been excluded.</i> <i>Fill in all alternatives in table A-2.</i>		<input type="checkbox"/> All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been excluded. <input type="checkbox"/> The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued	N/A	N/A
B.4.3. Is the identified baseline scenario reasonable considering all possible types of CPAs and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources? (VVS, v. 3.0, § 91) <i>Describe whether the choice of the identified baseline scenario is reasonable by validating the <u>key assumptions, calculations and rationales</u> used in the PoA-DD. Describe whether these are listed, relevant and <u>conservatively interpreted</u> in the PoA-DD.</i>		<input type="checkbox"/> The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2.. <input type="checkbox"/> The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.4.4. Does the baseline scenario sufficiently take into account all relevant national and/or sectoral policies within the chosen project boundary such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.?</p> <p>(VVS, v. 3.0, §§ 93, 192)</p> <p><i>Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PoA-DD. Two (2) types of national and/or sectoral policies have to be taken into account:</i></p> <p>(a) <i>National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels, known as E+ policies. For this type of national and/or sectoral policies or regulations, only those that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account</i></p> <p>(b) <i>National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programmes), known as E- policies. For this type of national and/or sectoral policies or regulations, those that have been implemented since the adoption by the COP of the CDM M&P (decision</i></p>		<p><i>Description:</i> The baseline is defined by the applied methodologies and the PoA-DD refers to it.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
17/CP.7, 11 November 2001) need not be taken into account in identifying a baseline scenario.				
B.4.5. What has been identified as the baseline scenario? Does the PoA-DD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM programme activity?. (VVS, v. 3.0, § 88)	/PoA-DD/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<p><i>Description:</i> The baseline scenarios have been identified in Section.B.4 for each scenario.</p> <p>For type III component: the baseline is that the animal manure is treated anaerobically without methane recovery and destruction; this is applied to all four scenarios.</p> <p>For type I component:</p> <p>Scenario I: the equivalent thermal energy is generated based on fossil fuel</p> <p>Scenario II: the equivalent electricity is generated based on ECPG or SCPG</p> <p>Scenario III: the equivalent electricity is generated based on ECPG or SCPG and the equivalent thermal energy is generated based on fossil fuel</p> <p>Scenario IV: the equivalent electricity is generated based on ECPG or SCPG</p> <p><i>Validator's action:</i> The PoA-DD has been checked and compared to the methodologies adopted in each scenario</p> <p><i>Conclusion:</i> The PoA-DD contains a verifiable description of the identified baseline scenarios.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.5. Additionality Determination <i>The assessment of additionality will be validated with focus on whether the programme / CPA itself is not a likely baseline scenario.</i>				
B.5.1. Methodology				
B.5.1.1. Does the PoA-DD describe how the programme is additional (i.e. that none of the implemented CPAs would occur in absence of the CDM) and does the additionality justification follow the requirements of the applied methodology and/or methodological tools? (VVS, v. 3.0, §§ 72 (d), 101-102 and EB70, Annex 5, §9) <i>Describe how it is validated that the additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i>	/PoA-DD/ /PoAR/	<i>Description:</i> It is indicated that the additionality assessment will be held at CPA level. And also the related eligibility criteria have been included. However, the board decision indicating that the PoA is a voluntary coordinated action is missing. Also, the application of 'Guidelines for demonstrating additionality of microscale project activities' is not justified. <i>Validator's action:</i> The PoA-DD is reviewed against the VVS and guidelines <i>Conclusion:</i> PoA CAR-B2 was raised.	CAR PoA- B2	OK
B.5.2. Assessment and Demonstration of Additionality of the PoA as a whole				
B.5.2.1. Has it been demonstrated that: <ul style="list-style-type: none"> in the absence of the CDM the proposed 	/PoA-DD/	<i>Description:</i> The stated goal of the related CDM programme activity is defined in the PoA-DD and tries to demonstrate the following situation in the absence of the programme activity:	CAR PoA-	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>voluntary coordinated action would not be implemented, or</p> <ul style="list-style-type: none"> in the absence of the CDM the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. 	/PoAR/	<p><input checked="" type="checkbox"/> The proposed voluntary measure would not be implemented. However, the confirmation by the CME that the proposed PoA is a voluntary action is missing. And also, the PoA additionality demonstration is not clear.</p> <p><input type="checkbox"/> The mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region.</p> <p><input type="checkbox"/> The PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.</p> <p><i>Validator's action:</i> The PoA-DD is reviewed against the VVS and guidelines. And the stakeholder is interviewed.</p> <p><i>Conclusion:</i> PoA CAR-B2 was raised.</p>	B2	
<p>B.5.3. Assessment and Demonstration of CPA Additionality Identification of alternatives Step 1</p> <p>(in case of SSC projects pl. skip steps 1 and 2 if appropriate; in cases where the baseline scenario is prescribed in the approved methodology, skip step 1, (VVS, v. 3.0, § 115))</p>				
<p>B.5.3.1. Does the list of alternatives contain the status-quo situation, the programme not undertaken as a CDM project as well as all other viable alternatives for supplying the outputs or services that are to be supplied by the proposed CDM programme activity? Do all identified alternatives comply with</p>		<p><i>Description:</i> The baseline is defined by the applied methodologies</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>enforced legislations?</p> <p>(VVS, v. 3.0, §§ 114, 116)</p> <p><i>Describe whether the list of alternatives is credible and complete. Describe how it is validated that the list of alternatives is complete, realistic and that the alternatives are credible and that all alternatives comply with the existing and enforced legislation.</i></p> <p><i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i></p>				
<p>B.5.4. Assessment and Demonstration of CPA Additionality Investment analysis Step 2</p> <p><i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 4 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..</i></p>				
<p>B.5.4.1. Does the project documentation provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?</p> <p>(VVS, v. 3.0, § 117)</p> <p><i>In cases where the project activity would produce no financial or economic benefits other than CDM-related income, describe how it has been validated that at least one of the alternatives identified is less costly than the proposed</i></p>		<p><i>Description:</i> According to paragraph 7 of EB 70 Annex 5, additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur which mean that The additionality will be demonstrated on the CPA level.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>project activity.</i>				
B.5.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation? (EB 62 Annex 5 , §8) <i>Describe the steps taken to validate this issue.</i>		<input type="checkbox"/> Yes, a clear, viewable and unprotected Excel spreadsheet is available. <input type="checkbox"/> No, a respective Excel spreadsheet needs to be made available for investment calculation. In this context the following additional findings have been identified: According to paragraph 7 of EB 70 Annex 5, additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur which mean that The additionality will be demonstrated on the CPA level.	N/A	
B.5.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included? (EB 62 Annex 5 § 3) <i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.</i>		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	
B.5.4.4. Is the fair value calculated in accordance with local accounting regulations (where		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A	N/A	

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>available) or international best practice?</p> <p>(EB 62 Annex 5, § 4)</p> <p><i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i></p>		<p><i>Conclusion: N/A</i></p>		
<p>B.5.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?</p> <p>(EB 62 Annex 5, § 4)</p>		<p><i>Description: The additionality will be demonstrated on the CPA level.</i></p> <p><i>Validator's action: N/A</i></p> <p><i>Conclusion: N/A</i></p>	N/A	
<p>B.5.4.6. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?</p> <p>(EB 65 Annex 21, EB 62, Annex 5, §19)</p> <p><i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.</i></p> <p><i>Assess whether the alternative to the CPA is to supply the same or substitute products or services. In this case, an investment comparison analysis shall be used.</i></p>		<p><i>Description: Benchmark approach will be adopted for project which is unqualified according to 'Guidelines for demonstrating additionality of microscale project activities, or 'Guidelines on the demonstration of additionality of small-scale project activities' para.2. However, The suitability of 'Guidelines for demonstrating additionality of microscale project activities' of all CPAs in PoA needs to be justified.</i></p> <p><i>Validator's action: By means of document check and comparison with methodologies and guidelines</i></p> <p><i>Conclusion: PoA CAR-B2 was raised and correction is necessary.</i></p>	PeA CAR- B2	OK
<p>B.5.4.7. Were the input values used in the</p>		<p><i>Description: The additionality will be demonstrated on the CPA level.</i></p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
investment analysis valid and applicable at the time of the investment decision? (EB 62 Annex 5, § 6) <i>Describe the steps taken to validate this issue</i>		<i>Validator's action:</i> N/A <i>Conclusion:</i> N/A		
B.5.4.8. Are the input parameters based on values from Feasibility Study Reports that are approved by national authorities for proposed project activities? (VVS, v. 3.0, § 122) <i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and POA-DD.</i>		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
In case a simple cost analysis has been done, go to B.4.5;				
B.5.4.9. Has been a suitable financial indicator chosen by the project participants? (VVS, v. 3.0, § 120 (a)) <i>Describe the steps taken to validate this issue.</i>		<i>Description:</i> The project IRR (before tax) has been chosen as the financial indicator. However, the benchmark hasn't been defined. <i>Validator's action:</i> By means of document check and comparison with methodologies and guidelines <i>Conclusion:</i> PoA CAR-B2 was raised and correction is necessary.	PoA CAR- B2	OK
B.5.4.10. Are depreciation and other non-cash related items only considered in the tax		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
calculation and not as cash outflow? (EB 62 Annex 5, § 5)		<i>Conclusion: N/A</i>		
B.5.4.11. Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)		<i>Description: The additionality will be demonstrated on the CPA level.</i> <i>Validator's action: N/A</i> <i>Conclusion: N/A</i>	N/A	N/A
B.5.4.12. Does the CPA-DD and related spreadsheets contain a sensitivity analysis and does the same contain variation of parameters which may vary throughout the project lifetime? (EB 62 Annex 5, § 20-21) <i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i>		<i>Description: The additionality will be demonstrated on the CPA level.</i> <i>Validator's action: N/A</i> <i>Conclusion: N/A</i>	N/A	N/A
B.5.4.13. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation? (EB 62 Annex 5, § 20)		<i>Description: The additionality will be demonstrated on the CPA level.</i> <i>Validator's action: N/A</i> <i>Conclusion: N/A</i>	N/A	N/A
B.5.4.14. Have parameters, constituting less than		<i>Description: The additionality will be demonstrated on the CPA level.</i>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
20% of total project costs or revenues, been identified with potential material impact on the financial parameter? (EB 62 Annex 5, § 20) <i>Describe whether those parameters are considered in the sensitivity analysis?</i>		<i>Validator's action:</i> N/A <i>Conclusion:</i> N/A		
B.5.4.15. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 62 Annex 5, § 21) <i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
B.5.4.16. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 62 Annex 5, § 9)		<input type="checkbox"/> N/A <input type="checkbox"/> Yes, the costs of financing expenditures have been included. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified The additionality will be demonstrated on the CPA level.	N/A	N/A
B.5.4.17. In case of equity IRR: Is the part of the investment costs, which is financed by equity, considered as net cash outflow and is the part financed by debt excluded in net		<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes, in- and outflows have been considered correctly. <input type="checkbox"/> No, this requirement is not met.	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
cash outflow? (EB 62 Annex 5, § 10)		In this context the following additional findings have been identified: N/A		
In case a comparison analysis has been done, go to B.5.5				
B.5.4.18. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)? (EB 62 Annex 5, §12) <i>Describe the steps taken to validate this issue.</i>		<i>Description:</i> N/A <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
B.5.4.19. Is a pre-tax benchmark applied in case of project IRR is calculated? In cases where a post-tax benchmark is applied, assess whether actual interest payable is taken into account in the calculation of income tax. (EB 62 Annex 5, § 11) <i>If this is not the case, ensure that taxation is excluded from the investment analysis.</i> <i>As per the guidance it is recommended to select a pre tax benchmark in order to describe the steps taken in assessing this</i>		<input type="checkbox"/> N/A <input type="checkbox"/> A pre-tax benchmark is applied 8 <input type="checkbox"/> The benchmark is post-tax and the interest has been taken into account for the calculation <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified: N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>requirement.</i>				
B.5.4.20. Have both benchmark and cash flows expressed consistently, i.e. real terms (excluding the effect of inflation) or nominal terms? <i>Describe the steps taken to validate this issue.</i>		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
B.5.4.21. Is the benchmark value suitable for the project activity and is it reasonable to assume that no investment would be made at a rate of a lower return than the benchmark? (VVS, v. 3.0, § 121 (c)) <i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i>		<i>Description:</i> The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
B.5.4.22. Is the benchmark applied based on parameters that are available and standard in the market? (VVS, v. 3.0, 121 (b), EB 62 Annex 5, §§13, 15, 16, 18) <i>Assess whether company-specific benchmarks or benchmarks based on parameters that are available in the market are suitable to the project activity. A benchmark that includes the subjective profitability expectations or risk profile of the project developer (size risk premiums, company own risk premium, etc) is not suitable for project activities open to be developed by other entities.</i> <i>If cost of equity is applied, assure that best financial practices are used and are based on data sources which can be cross-checked</i>		<i>Description:</i> N/A. <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>against third-party or publicly available sources.</i></p> <p><i>If cost of debt is used for the calculation of the benchmark, ensure that it is calculated as the cost of financing in the capital markets (e.g: commercial lending rates)</i></p> <p><i>If the cost/equity financing structure of the project is not yet available, 50% equity, 50% debt financing may be assumed as default.</i></p>				
Following checklist is intended for cases where internal company benchmarks are applied, otherwise go to B.5.5				
<p>B.5.4.23. Is it ensured that the project cannot be developed by other developers than the PP, so that internal company benchmarks or expected returns are suitable for the project activity?</p> <p>(EB 62 Annex 5, §§ 13 – 14)</p> <p><i>Describe how it has been validated that there is only one possible project developer.</i></p>		<p><i>Description:</i> Internal company benchmarks are not applied.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A
<p>B.5.4.24. Was the benchmark consistently used in the past by the same company for similar projects with similar risks?</p> <p>(EB 62 Annex 5, § 14)</p> <p><i>If applicable, assess the past financial behaviour of the entity during the last 3 years in relation to similar projects.</i></p>		<p><i>Description:</i> Internal company benchmarks are not applied.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.5.4.25. Was the cost of debt calculated based on the weighted average cost of debt financing of the legal entity owning the CDM project activity? (EB 62 Annex 5, § 16)</p> <p><i>If applicable, assess whether loans, bonds or debt financing from a parent company are calculated according to the latest "Guidance on Investment Analysis".</i></p> <p><i>In case that the debt structure of the project is not yet available, the cost of debt can be assumed as the commercial lending rate in the company or the yield of a 10-year bond issued by the government of the host county.</i></p>		<p><i>Description:</i> Internal company benchmarks are not applied.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A
<p>B.5.4.26. Does the equity/debt ratio of the project reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity? (EB 62 Annex 5, § 17)</p> <p><i>Assess the latest balance sheets of the legal entity owning the assets of the project activity, in case these are available and audited by a third party within two years prior to the submission of the CPA-DD for validation, and the accounting books reflect the total value of all assets needed for the project activity.</i></p> <p><i>If debt/equity financing structure is not available, 50% equity, 50% debt shall be considered as default.</i></p>		<p><i>Description:</i> Internal company benchmarks are not applied.</p> <p><i>Validator's action:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.5.5. Assessment and Demonstration of CPA Additionality Barrier analysis Step 3 or SSC additionality assessment				
<p>B.5.5.1. Are there any barriers given which have a clear and direct impact on the financial returns of the project?</p> <p>(VVS, v. 3.0, § 125)</p> <p><i>In case of LSC projects those issues <u>cannot be considered</u> as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall apply, i.e. the assessment of the investment barrier according to EB 62 Annex 5. Only unavailability of sources of finance and/or risk related barriers, for example, the risk related to technical failure that could have negative impact on financial performance are acceptable as barriers.</i></p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> According to “General Guidelines to SSC CDM methodologies”, four barriers analysis are provided to assess the additionality of small scale projects. Investment barrier analysis is chosen for each CPA.</p> <p><i>Validator’s action:</i> The PoA-DD has been reviewed against the relevant guidelines.</p> <p><i>Conclusion:</i> No deviation has been identified</p>	OK	OK
<p>B.5.5.2. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM?</p> <p>(EB 50 Annex 13, § 9)</p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level.</p> <p><i>Validator’s action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> The additionality will be demonstrated on the CPA level.</p>	OK	OK
B.5.5.3. Would provision of additional financial means lead to the mitigation of the		<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>barrier(s) demonstrated?</p> <p>(EB 50 Annex 13, § 7)</p> <p><i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i></p>		<p>the CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> The additionality will be demonstrated on the CPA level.</p>		
<p>B.5.5.4. How is it justified and evidenced that the barriers given in the PoA-DD / CPA-DD are real?</p> <p>(VVS, v. 3.0, § 126(a))</p>		<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> The additionality will be demonstrated on the CPA level.</p>	OK	OK
<p>B.5.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives?</p> <p>(VVS, v. 3.0, § 126 (b))</p>		<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> The additionality will be demonstrated on the CPA level.</p>	OK	OK
<p>B.5.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real?</p> <p>(EB 50 Annex 13, § 4)</p>		<p><i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> The additionality will be demonstrated on the CPA level.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.5.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, § 5)		<i>Description:</i> The assessment of the investment barrier according to EB 62 Annex 5 is applied. The additionality will be demonstrated on the CPA level. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> The additionality will be demonstrated on the CPA level.	OK	OK
B.5.6. Assessment and Demonstration of CPA Additionality Common practice analysis Step 4 (in case of SSC projects or first-of-its-kind LSC projects skip this step)				
B.5.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type? (VVS, v. 3.0, § 129(a)) <i>Describe why the project activity is not common practice in a transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.</i>	/PoA-DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK
In case of projects activities applying ACM002, go to B.5.6.4				
B.5.6.2. To what extent similar projects have been undertaken in the relevant region? (VVS, v. 3.0, § 129(b))	/PoA-DD/ /PoA-	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>Similar projects are considered those that take place in a comparable environment w.r.t. regulatory framework, investment climate, access to technology and financing, etc. Registered CDM PA and PA that have been published on the UNFCCC website are not to be considered as similar.</i>	DD/ /POAR /	<i>Conclusion:</i> Not applicable as this is a SSC project.		
B.5.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed? (VVS, v. 3.0, § 129(c))	/PoA- DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK
B.5.6.4. Has an output range as +/- 50% of the design output of the project activity been calculated in order to define the capacity range for "similar" projects? (EB65 Annex 21, § 47)	/PoA- DD/ /PoA- DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK
B.5.6.5. Does N_{all} include only plants that have started commercial operation before the the start date of the project and are within the applicable output range? (EB65 Annex 21, § 47) <i>Under N_{all}, registered CDM projects and projects undergoing validation are not to be included.</i>	/PoA- DD/ /PoA- DD/ /POAR /	<i>Description:</i> Not applicable as this is a SSC project. <i>Validator's action:</i> The PoA-DD has been reviewed. <i>Conclusion:</i> Not applicable as this is a SSC project.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>B.5.6.6. Does N_{diff} include only plants that apply different “technology” than the project activity? (EB65 Annex 21, §§ 9, 47)</p> <p><i>The term “technology” refers to energy fuel, investment climate (access to technology, subsidies, legal regulations, etc...) or unit cost of output.</i></p> <p><i>Assess how the essential distinctions to identify the different measures have been carried out.</i></p>	/PoA-DD/ /POAR/ /	<p><i>Description:</i> Not applicable as this is a SSC project.</p> <p><i>Validator’s action:</i> The PoA-DD has been reviewed.</p> <p><i>Conclusion:</i> Not applicable as this is a SSC project.</p>	OK	OK
<p>B.6. Algorithms and/or formulae used to determine emissions reductions</p> <p><i>It is assessed whether the steps taken and the equations and parameters applied in the POA-DD/CPA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).</i></p>				
<p>B.6.1. Are the equations applied correctly according to the applied approved methodology? (VVS, v. 3.0, §§ 72(c), 96)</p> <p><i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data</i></p>	/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-	<p><input type="checkbox"/> The equations applied for calculation are correctly applied according to the approved methodology.</p> <p><input checked="" type="checkbox"/> The following mistakes have been identified in this context:</p> <p>Scenario I</p> <ul style="list-style-type: none"> - The determination of $B_{0,LT}$ is not quoted correctly - Please clarify the determination of $PE_{transp,y}$ - The numbering of the formulas is not clear <p>Scenario II</p> <ul style="list-style-type: none"> - The ‘tool’ in sub-step 6 is not defined. 	CAR PoA-B3	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>and parameter values provided in the programme documentation</i>	I.C./ /AMS-I.D./ /AMS-I.F./	Several findings have been identified in Scenario I and II. which are also relevant for scenario III, IV <i>Validator's action:</i> The PoA-DD has been checked against the methodologies and tools. <i>Conclusion:</i> PoA CAR-B3 was raised.		
B.6.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? (VVS, v. 3.0, §§ 97, 98) <i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of activity typical CPA and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i>	/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> The AMS-III.D. Version 17, AMS-I.C. version 19 and AMS-I.F. version 2 were selected for calculating the ERs. For the ERs calculation of type III component of a CPA, the calculation of baseline emissions used the method/formula in paragraph 9(a) and 10 of AMS-III.D. version 17 and the calculation of project emissions used the formula in paragraph 13 of AMS-III.D. version 17 For the ERs calculation of type I components of a CPA, the calculation of ERs used the formula in paragraph 14 of AMS-I.F. version 02 and the formula in paragraph 22 and 43 of AMS-I.C. version 19. <i>Justification of evidence:</i> The PoA-DD has been checked against AMS-I.F., AMS-I.C., and AMS-III.D. <i>Conclusion:</i> The equations applied are properly justified and been reflect all other methodological choices.	OK	OK
B.6.3. Have conservative assumptions been used when calculating the emission emissions? (VVS, v. 3.0, §§ 98, 99(a)) <i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the POA-</i>	/PoA-DD/ /PoAR/ /AMS-	<i>Description:</i> The assumptions used in the choice of data of $B_{0,LT}$, MCF_i , $\eta_{BL,thermal}$ are not clear <i>Validator's action:</i> The PoA-DD has been check against the methodologies. <i>Conclusion:</i> PoA CAR-B4 was raised.	CAR PoA- B4	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>DD/CPA-DD including references and sources and are conservatively interpreted in the POA-DD/CPA-DD.</i>	III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./			
<p>B.6.4. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?</p> <p>(VVS, v. 3.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the programme activity and typical CPA.</i></p>	<p>/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./</p>	<p><i>Description:</i> In Scenario the data and parameters that are to be reported ex-ante are listed in Section B.2. However, the assumptions used in the choice of data of $B_{0,LT}$, MCF_i, $\eta_{BL,thermal}$ are not clear. The parameter of $EF_{grid,CM,y}$ is not justified.</p> <p><i>Validator's action:</i> The PoA-DD has been check against the methodologies and tools</p> <p><i>Conclusion:</i> PoA CAR-B4 was raised.</p>	CAR PoA-B4	OK
<p>B.6.5. Are all ex-ante calculation values for monitoring parameters (as defined per chapter B.7.1) reasonable?</p> <p>(VVS, v. 3.0, § 98)</p> <p><i>Describe clearly the steps taken to assess whether the</i></p>	<p>/PoA-DD/ /IM03/</p>	<p><input checked="" type="checkbox"/> All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative.</p> <p><input type="checkbox"/> The following mistakes have been identified in this context:</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i>				
B.6.6. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change? <i>Describe the steps taken to validate this issue.</i>	/PoA-DD/ /IM03/	<p><i>Description:</i> The PoA-DD has been checked and the first CPA is visited. The implementation of the PoA could be valuable to the environment and the mitigation of climate change. The emission reductions are real and measurable</p> <p><i>Validator's action:</i> The PoA-DD has been checked and the first CPA is visited.</p> <p><i>Conclusion:</i> The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change..</p>	OK	OK
B.7. Operational, Management and Monitoring Plan of the PoA <i>It is assessed whether the operational, management and monitoring plan is appropriate for the project activity and in line with the applied methodology.</i>				
B.7.1. Operational and Management Plan				
B.7.1.1. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a clear definition of roles and responsibilities of personnel involved in the CPA inclusion (i.a. their competencies) as well as records of arrangements for training	/PoA-DD/ /IM03/	<p><i>Description:</i> In Section C of the PoA-DD, the CME and the livestock farm CDM team are involved in record keeping of each CPA under the PoA. However, the competence of livestock farm CDM team and their role in CPA inclusion is not defined. And the different between 'the monitoring team' and 'livestock farm CDM team' is not clear. The monitoring organization is not clear.</p> <p><i>Validator's action:</i> The PoA-DD has been checked against the standard.</p>	CAR PoA- B5	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
and capacity development? (EB70, Annex 5, §§19(a,b),20)		<i>Conclusion:</i> PoA CAR-B5 was raised.		
B.7.1.2. Are procedures for technical review of the CPA inclusion part of the management system? (EB70, Annex 5, §§19(c),20)	/PoA-DD/ /PoAR/ /IM03/	<i>Description:</i> Procedures for technical review of CPA inclusion part is missing <i>Validator's action:</i> The PoA-DD has been checked against the standard. <i>Conclusion:</i> PoA CAR-B5 was raised.	CAR PoA- B5	OK
B.7.1.3. Do the arrangements include a system/ procedure to avoid double accounting, e.g., to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA? (EB70, Annex 5, §§19(d),20)	/PoA-DD/ /PoAR/ /IM03/	<i>Description:</i> The procedure to avoid double counting of CPAs is described. According to AMS-I.C. §§12. 'If electricity and/or steam/heat produced by the project activity is delivered to a third party i.e. another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered into that ensures there is no double-counting of emission reductions.' This criterion has been included in the list of eligibility criteria. <i>Validator's action:</i> The PoA-DD has been checked against the standard and the methodology. <i>Conclusion:</i> Requirement is fulfilled.	OK	OK
B.7.1.4. Does the management system include a records and documentation control process for each CPA under the PoA? (EB70, Annex 5, §§19(e),20)	/PoA-DD/ /PoAR/ /IM03/	<i>Description:</i> In Section C, the process to control both hard copy and soft copy is defined. However, management system is not clear. <i>Validator's action:</i> The PoA-DD has been checked against the standard and the methodology. <i>Conclusion:</i> PoA CAR-B5 was raised .	CAR PoA- B5	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
B.7.1.5. Do the arrangements include measures for continuous improvement of the PoA management system? (EB70, Annex 5, §§19(g),20)	/PoA-DD/ /PoAR/ /IM03/	<i>Description:</i> The management system is not clear. <i>Validator's action:</i> The PoA-DD has been checked against the standard and the methodology. <i>Conclusion:</i> PoA CAR-B5 was raised.	CAR PoA - B5	OK
B.7.1.6. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a clear definition of roles and responsibilities of personnel involved in the CPA inclusion (i.a. their competencies) as well as records of arrangements for training and capacity development? (EB70, Annex 5, §§19(a,b),20)	/PoA-DD/ /PoAR/ /IM03/	<i>Description:</i> The management system is not clear. <i>Validator's action:</i> The PoA-DD has been checked against the standard and the methodology. <i>Conclusion:</i> PoA CAR-B5 was raised.	CAR PoA - B5	OK
B.7.2. Monitoring Plan				
B.7.2.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan? (VVS, v. 3.0, §§ 72 (e), 131, 132 (a) (i)) <i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i> <i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with</i>	/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-	<i>Description:</i> The list of monitoring parameters is not complete. <i>Validator's action:</i> The PoA-DD has been checked against methodologies. <i>Conclusion:</i> PoA CAR-B6 was raised.	CAR PoA - B6	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.																								
<i>the applied methodology.</i> <i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i>	I.D./ /AMS- I.F./																											
B.7.2.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible within the PoA design? (VVS, v. 3.0, §§ 132 (b) (i), 133(b)) <i>Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design.</i>	/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-I.D./ /AMS-I.F./	<i>Description:</i> A clear description of the parameters under each monitoring means, the frequency of the monitoring means is missing. Also, how to monitor soil application need further clarification. <i>Validator's action:</i> The PoA-DD has been checked and the farm owner is interviewed on-site. <i>Conclusion:</i> PoA CAR-B6 was raised.	CAR PoA- B6	OK																								
B.7.2.3. The Monitoring Parameters (VVS, v. 3.0, § 132(a)– (ii)) <i>Indicate whether the provided information for the monitoring parameter complies with the approved methodology including applicable tool(s) in the aspects listed.</i> <i>For checking the use of international standards in the nomenclature, consider:</i> a) Standard format (e.g. 1,000 representing one thousand and 1.0 representing one).	/PoA-DD/ /PoAR/	<table><tr><td>Requirement</td><td>OK</td><td>Not OK</td><td>N/A</td></tr><tr><td>Label</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Data Unit</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Description</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Source of data</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Measurement equipment / measure method</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	Requirement	OK	Not OK	N/A	Label	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Data Unit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Source of data	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Measurement equipment / measure method	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CAR PoA- B6	OK
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<div>b) Values shall be directly given in SI units – or additionally to original units transferred to SI.</div> <div>c) Short scale naming system: (Only) million = 10⁶ and billion 10⁹ shall be used.</div>		<div>Monitoring frequency<div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div> <div>QA/QC procedures<div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div> <div>Purpose of data<div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div> <div>Standard format<div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div></div> <div>SI units<div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div> <div>Short scale naming<div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div></div>		
<div>B.7.2.4. Has a monitoring plan for all types of CPA been developed in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?</div> <div>(VVS, v. 3.0, § 198)</div>	<div>/PoA-DD/ /PoAR/</div>	<div>Description: A clear description of the frequency of the monitoring means is missing.</div> <div>Validator’s action: The PoA-DD has been checked against the methodologies.</div> <div>Conclusion: PoA CAR-B6 was raised.</div>	<div>CAR PoA- B6</div>	<div>OK</div>
<div>B.7.2.5. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?</div> <div>(VVS, v. 3.0, § 131)</div> <div>Check whether all necessary equations have been provided in the POA-DD/CPA-DD. Pl. consider that ex-post and ex-ante calculations might be different.</div> <div>Please consider that additional equations might be</div>	<div>/PoA-DD/ /PoAR/ /AMS-III.D./ /AMS-I.C./ /AMS-</div>	<div>Description: Means of implementing the monitoring plan has been clearly described. However, some monitoring parameters are missing.</div> <div>Validator’s action: The PoA-DD has been checked against the methodologies.</div> <div>Conclusion: PoA CAR-B6 was raised and correction is necessary.</div>	<div>CAR PoA- B6</div>	<div>OK</div>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>necessary to calculate auxiliary parameters.</i>	I.D./ /AMS- I.F./			
<p>B.7.2.6. Is it likely that the monitoring arrangements described in the POA-DD/CPA-DD can properly be implemented in the context of the project activity?</p> <p>(VVS, v. 3.0, § 132(b) (i))</p> <p><i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i></p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> The monitoring arrangements are not clearly described.</p> <p><i>Validator's action:</i> The PoA-DD has been checked against the methodologies.</p> <p><i>Conclusion:</i> PoA CAR-B6 was raised.</p>	CAR PoA- B6	OK
<p>B.7.2.7. Are the QA/QC procedures appropriate and sufficient to ensure the emission reductions achieved from the programme activity can be reported ex-post and verified?</p> <p>(VVS, v. 3.0, § 132(b) (ii))</p> <p><i>Please consider the description given in the relevant section of the PoA-DD and the CPA-DD. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i></p>	/PoA-DD/ /PoAR/	<p><i>Description:</i> QA/QC procedures were properly described in the PoA DD. However, some monitoring parameters are missing.</p> <p><i>Validator's action:</i> The PoA-DD has been checked against the methodologies.</p> <p><i>Conclusion:</i> PoA CAR-B6 was raised.</p>	CAR PoA- B6	OK
<p>B.7.2.8. Are procedures identified for data management?</p>	/PoA-DD/	<p><i>Description:</i> Data management process including responsibilities, what records to keep, storage area of records and how to process performance documentation is missing. The management system is</p>	CAR PoA-	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>(VVS, v. 3.0, § 132(b) (ii))</p> <p><i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i></p> <p><i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i></p>	/PoAR/	<p>not clear.</p> <p><i>Validator's action:</i> The PoA-DD has been checked.</p> <p><i>Conclusion:</i> PoA CAR-B6 was raised.</p>	B6	
<p>C. Duration and Crediting Period</p> <p><i>It is assessed whether the temporary boundaries of the programme are clearly defined.</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
C.1.1. Is the starting date of any CPA prior to the commencement of the validation of the PoA (date of publication for GSCP)? (VVS, v. 3.0, § 193)	/PoA-DD/ /PoAR/	<i>Description:</i> The date of publication for GSCP is 14/06/2012, and the starting date of first CPA is 01/07/2012. It is also addressed in eligibility criteria 5 'The start date of the project activities under the CPA, which is the earliest date among equipment purchase date, debt contract date and construction start date, are later than the PoA GSC start date.' However, the evidence of the start date is missing. <i>Validator's action:</i> The PoA-DD and CPA-DD have been checked against the GSCP date <i>Conclusion:</i> PoA CAR-C1 was raised.	PoA CAR- C1	OK
C.1.2. Is the project's operational lifetime clearly defined and evidenced? <i>Check whether the project lifetime is correctly defined. Consider the latest "Guidance on the assessment of investment analysis".</i> <i>Check in case of phased implementation this has been reflected throughout the whole PoA-DD incl. the financial assessment, if applicable.</i>	/PoA-DD/	<i>Description:</i> The operational lifetime will be defined at CPA level <i>Validator's action:</i> N/A <i>Conclusion:</i> N/A	N/A	N/A
C.1.3. Is the start of the crediting period clearly defined and reasonable? <i>Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for validation and registration.</i> <i>The crediting period of the PoA should be renewed every seven years (every 20 years for A/R PoA) from the start date of the lifetime of the PoA.</i>	/PoA-DD/ /PoAR/	<i>Description:</i> 'In case of small-scale PoA, the start date must be stated as at least 4 weeks after the estimated submission date'. Therefore the start date of PoA is not reasonable. <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-C1 was raised.	CAR PoA- C1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>Life time of the PoA starts on the date specified in the PoA-DD section B.1 or on the date of registration, whichever is later.</i></p> <p><i>In case of small-scale PoA, the start date must be stated as at least 4 weeks after the estimated submission date;</i></p> <p><i>In case of large-scale PoA, the start date must be stated as at least 8 weeks after the estimated submission date.</i></p> <p><i>(PoA registration uploading requirements step 4)</i></p>				
<p>C.1.4. Does the crediting period of the PoA or an individual CPA not exceed 28 years?</p> <p>(VVS, v. 3.0, § 197)</p>	<p>/PoA-DD/ /PoAR/</p>	<p><i>Description:</i> It is addressed in eligibility criteria 6 that 'the CPA crediting period does not exceed the PoA end date.'</p> <p><i>Validator's action:</i> The PoA-DD has been checked.</p> <p><i>Conclusion:</i> CAR PoA-C1 was raised.</p>	<p>CAR PoA-C1</p>	<p>OK</p>
<p>D. Environmental Impacts</p> <p><i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.</i></p>				
<p>D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA) on PoA and/or typical CPA level?</p> <p>(VVS, v. 3.0, §§ 134-135, 199)</p> <p><i>Check the host party regulations regarding EIA. If no requirements for an EIA exist, discuss whether the project participants conducted an analysis for the environmental</i></p>	<p>/PoA-DD/ /EIAL/</p>	<p><i>Description:</i> In 'Law of the Peoples Republic of China on Environmental Impact Assessment' issued in 2002, it is described in Article 16(2) that 'Where slight environmental impact might result, an environmental impact report form shall be developed to make analysis or special assessment on the environmental impact' and (3) 'Where the environmental impact is very small, rendering environmental impact assessment unnecessary, the environmental protection impact registration form shall be filled up.'</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>impacts of the project activity.</i>		<p><i>Validator's action:</i> The PoA-DD has been checked and the host party regulation has been investigated.</p> <p><i>Conclusion:</i> As per Host Party requirements an Environmental Impact Assessment (EIA) is requested on CPA level.</p>		
<p>D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved in accordance with the host Party procedures?</p> <p>(VVS, v. 3.0, §§ 135, 199)</p> <p><i>Check the EIA and its approval, if applicable. If the EIA is conducted at CPA level, please assess if the EIA was conducted according to the description in the CPA-DD and the PoA-DD.</i></p>	/PoA-DD/ /EIAL/	<p><i>Description:</i> It has been included in the eligibility criteria 9 that 'Each project activities included in the CPA must have obtained approval of EIA'.</p> <p><i>Validator's action:</i> The PoA-DD has been checked and the host party regulation has been investigated.</p> <p><i>Conclusion:</i> As per Host Party requirements an Environmental Impact Assessment and approval are requested on CPA level.</p>	OK	OK
<p>D.1.3. Has it been clearly indicated on which level i.e. PoA level or CPA level, an environmental analysis has been carried out or will be carried out?</p> <p>(VVS, v. 3.0, § 200)</p> <p><i>Please check whether the indication is in line with the provided documentation.</i></p>	/PoA-DD/	<p><i>Description:</i> The environmental analysis will be carried out at CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been checked and host party regulation has been investigated.</p> <p><i>Conclusion:</i> The environmental analysis will be carried out at CPA level.</p>	OK	OK
<p>D.1.4. Does the PoA-DD contain a sufficiently described justification on the choice of level at which the EIA is undertaken?</p>	/PoA-DD/	<p><i>Description:</i> The reason to justify the choice of level is provided in Section E.1.. As per Host Party requirements an Environmental Impact Assessment and approval are requested on CPA level.</p> <p><i>Validator's action:</i> The PoA-DD has been checked and the host party</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
		regulation has been investigated. <i>Conclusion:</i> The reason to justify the choice of level is provided in Section E.1. and the reason is considered as sufficient.		
D.1.5. Are transboundary environmental impacts considered in the analysis? (VVS, v. 3.0, § 134) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i>	/PoA-DD/	<i>Description:</i> Neither significant environmental impacts nor transboundary impacts have been observed. As per Host Party requirements an Environmental Impact Assessment and approval are requested on CPA level. <i>Validator's action:</i> The PoA-DD has been checked and the host party regulation has been investigated. <i>Conclusion:</i> The reason to justify the choice of level is provided in Section E.1. and the reason is considered as sufficient.	N/A	N/A
E. Stakeholder Comments <i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i>				
E.1.1. With regard to the PoA, how have relevant local stakeholders' comments been invited to consultation prior to the publication of the POA-DD/CPA-DD? (VVS, v. 3.0, §§ 138-140, 201, 202) <i>If such comments are to be sought at the CPA level this shall be described and reflected in the POA-DD and the CPA-DD.</i> <i>Check by means of document review and interviews with</i>	/PoA-DD/ /SHCP/ /	<i>Description:</i> It is described in Section F.2. that 'The questionnaires were delivered to local residents by the CME with the support of Local Rural Energy Office and also can be got by the residents themselves from the Local Rural Energy Office.' <i>Validator's action:</i> The PoA-DD has been checked and the stakeholder is interviewed. <i>Conclusion:</i> Relevant local stakeholders' comments been invited to consultation prior to the publication of the POA-DD/CPA-DD.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>local stakeholders if and when a local stakeholder consultation process has been carried out.</i>				
E.1.2. How have the comments received been compiled and can the summary be assessed as complete and adequate? (VVS, v. 3.0, §§ 201, 202)	/PoA-DD/ /SHCP /	<i>Description:</i> The allocation of questionnaire is described in Section.F.2. However, the cities covered in the questionnaires is not clarified and also the demographic characteristic of the respondents is not provided before the adequacy could be assessed. <i>Validator's action:</i> The PoA-DD has been checked and the background research is carried out. <i>Conclusion:</i> PoA CL-E1 was raised.	CL PoA- E1	OK
E.1.3. With regard to the PoA, can the local stakeholder consultation process be assessed as adequate? (VVS, v. 3.0, §§ 138-140, 201) <i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.</i> <i>Please consider the following requirements in this context:</i> <i>(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i> <i>(b) The summary of the comments received as provided in</i>	/PoA-DD/ /SHCP /	<i>Description:</i> The evidence for stakeholder comments is missing. <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CL-E1 was raised.	CL PoA- E1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p><i>the PoA-DD/CPA-DD is complete;</i></p> <p><i>(c) The project participants have taken due account of any comments received and have described this process in the PoA-DD/CPA-DD.</i></p>				
F. Others				
F.1. Definition of Roles				
<p>F.1.1. Does the section A.3 of the POA-DD include an identification of the coordinating/ managing entity (a private or public entity), Host Party(ies) and PoA participants?</p> <p><i>Project participants may or may not be involved in one of the CPAs related to the PoA. The operators of individual CPAs are not required to be project participants. CDM programme participation is only recorded at the PoA level.</i></p>	/PoA-DD/ /PoAR /	<p><i>Description:</i> The CME and participants are identified. However, whether the Party involved wishes to be considered as project participant need to be justified.</p> <p><i>Validator's action:</i> The PoA-DD has been checked.</p> <p><i>Conclusion:</i> PoA CAR-F1 was raised.</p>	CAR PoA- F1	OK
<p>F.1.2. Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD and is the information provided internally consistent with section A.3 of the PoA-DD?</p>	/PoA-DD/ /PoAR /	<p><i>Description:</i> Whether the Party involved wishes to be considered as project participant need to be justified</p> <p><i>Validator's action:</i> The PoA-DD has been checked.</p> <p><i>Conclusion:</i> PoA CAR-F1 was raised.</p>	CAR PoA- F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
F.2. Approval - Contribution to Sustainable Development <i>The written approval of the parties involved is a mandatory requirement.</i>				
F.2.1. Have written approvals of all parties involved (incl. the CME) been provided to the validation team? (VVS, v. 3.0, § 38) <i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.</i> <i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i>	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website? (VVS, v. 3.0, §§ 41) <i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i>	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? (VVS, v. 3.0, § 39(a))	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
F.2.4. Do the written approvals confirm that the participation is voluntary? (VVS, v. 3.0, § 39(b))	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country? (VVS, v. 3.0, § 39(c))	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number? (VVS, v. 3.0, §§ 39(d))	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.7. Are the written approvals unconditional with regard to F.1.3 to F.1.6? (VVS, v. 3.0, § 40)	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.8. Is the information regarding the project participants listed in tabular form in the PoA-DD and is internally consistent with the information provided in the section that contains the contact information of the project participants? (VVS, v. 3.0, § 46)	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.2.9. Are all project participants listed in the PoA-DD		<i>Description:</i> Letter of Approval is missing	CAR	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
approved at least by one Party involved? (VVS, v. 3.0, § 45) <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i> <i>Describe the means of validation employed to draw this conclusion.</i>		<i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	PoA-F1	
F.2.10. Are any other project participants than those authorized as project participants listed in the PoA-DD? (VVS, v. 3.0, § 47)	/PoA-DD/ /dna/	<i>Description:</i> Letter of Approval is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.3. Modalities of Communication Statement <i>A due diligence on the Modalities of Communication statement in accordance with the requirements established in the VVS is mandatory.</i>				
F.3.1. Has a valid Modalities of Communication (MoC) been provided to the validation team from a project participant with whom the DOE has a contractual relationship? (VVS, v. 03, § 55) <i>Indicate whether a MoC has been received, with a clear reference to the contractual relationship of the project participant with the DOE.</i>	/PoA-DD/ /MOC P /	<i>Description:</i> Moc is missing <i>Validator's action:</i> The PoA-DD has been checked. <i>Conclusion:</i> PoA CAR-F1 was raised.	CAR PoA-F1	OK
F.3.2. Has the MoC been signed by a duly	/PoA-	The personal and corporate identities of all project participants	CAR	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<p>authorized person on behalf of the respective project participant? (VVS, v. 3.0, §§ 54, 56)</p> <p><i>Please Indicate how the personal and corporate identities of all project participants and focal points included in the MoC statement have been validated,:</i></p>	DD/ /MOC P /	<p>and focal points included in the MoC were validated by:</p> <p><input type="checkbox"/> Directly checking evidence for corporate and personal entity</p> <p><input type="checkbox"/> Notarized documentation</p> <p><input type="checkbox"/> Written confirmation from the project participant that all corporate and personal details are accurate and valid. , including specimen signatures and employment status of their signatories whether a letter of approval has been received, with a clear reference to the supporting documentation</p>	PoA-F1	
<p>F.3.3. Has the MoC statement correctly been completed? (VVS, v. 3.0, §§ 59, 60)</p>	/PoA-DD/ /MOC P /	<p><input type="checkbox"/> The latest version of the form (F-CDM-MOC) has been used</p> <p><input type="checkbox"/> Annex 1 of the MoC is correctly completed</p> <p><input type="checkbox"/> The project participants' authorized signatories signing the MoC are also listed in Annex 1 of the MoC.</p>	CAR PoA-F1	OK
<p>F.3.4. Does the MOC confirm that the Coordinating/managing entity of the PoA communicates with the Board, and is the information in the MoC on all Project participants consistent with the PoA-DD?</p>	/PoA-DD/ /MOC P /	<p><i>Description:</i> Moc is missing</p> <p><i>Validator's action:</i> The PoA-DD has been checked.</p> <p><i>Conclusion:</i> PoA CAR-F1 was raised.</p>	CAR PoA-F1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
<i>Procedures for modalities of communication between project participants and the Executive Board. shall apply, with the exception that the coordinating/managing entity shall be either sole or joint focal point for each area of communication. The limit of joint focal points for the programme shall be 5, or equal to the number of host Parties if greater than 5.</i>				
F.4. Project documentation editorial aspects <i>The POA-DD and the CPA-DD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
F.4.1. Have the latest versions of the PoA-DD and the CPA-DD form been applied? (VVS, v. 3.0, § 62)	/PoA-DD/ /PoA-DDs-T/	<i>Description:</i> The latest versions of the PoA-DD and the CPA-DD form have been applied. <i>Validator's action:</i> The PoA-DD and the CPA-DD have been check against the latest form. <i>Conclusion:</i> The latest versions of the PoA-DD and the CPA-DD form have been applied	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidence)	Draft Concl.	Final Concl.
F.4.2. Have the PoA-DD and the generic CPA-DD been duly filled in accordance with the latest guidance(s)? (VVS, v. 3.0, § 63)	/PoA-DD/ /PoA-DDs-T/	<p><i>Description:</i> The PoA-DD has been duly filled in accordance with the latest guidance. However, Spelling mistakes like 'Yunan Province' in the PoA title and PoA-DD need to be revised.</p> <p><i>Validator's action:</i> The PoA-DD and the CPA-DD have been check against the guidance.</p> <p><i>Conclusion:</i> The PoA-DD has been duly filled.</p>	PoA GAR- F4	OK

ANNEX 2: ASSESSMENT OF APPLICABILITY CRITERIA

Table A-2: Assessment of Applicability Criteria (VVS, v. 3.0 §§ 70 – 76)

<input checked="" type="checkbox"/>	Applicability Criteria of applied methodology(ies) have been completely incorporated in the eligibility criteria
<input type="checkbox"/>	Compliance with applicability criteria has been justified and fulfilled by the CPA as follows

Table A-2-1: Methodology AMS-III.D

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
1. The livestock population in the farm is managed under confined conditions;	The livestock in the Project Farm will be all managed under confined conditions, which can be confirmed through onsite check.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each livestock in the project farm will be managed under confined conditions. Therefore, this criterion is met. This will be checked for each CPA during the validation.
2. Manure or the streams obtained after treatment are not discharged into natural water resources (e.g. river or estuaries), otherwise AMS-III.H "Methane recovery in wastewater treatment" shall be applied;	Waste residue and liquid after treatment will be used as fertilizers, and therefore will not be discharged into natural water resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The application of the waste residue and liquid after treatment will be used as fertilizer. Therefore, this criterion is met. This will be checked for each CPA during the validation.
3. The annual average temperature of baseline site where anaerobic manure treatment facility is located is higher than 5°C;	According to the document or information of nearby meteorology bureau, the annual average temperature of baseline site will higher than 5°C.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The average temperature will be higher than 5°C. Therefore, this criterion is met. This will be checked for each CPA during the validation.
4. In the baseline scenario the retention time of manure waste in the anaerobic treatment system is greater than one month, and in case of anaerobic lagoons in the baseline, their depths are at least 1 m;	The manure waste is left to decay in the anaerobic lagoon. According to the size of anaerobic lagoons and daily amount of manure, it can be known the retention time of manure waste in the anaerobic treatment system; the depths of lagoon can be known based on the onsite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The retention time of manure waste in the anaerobic treatment system is greater than one month and in case of anaerobic lagoons in the baseline, their depths are at least 1 m. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
	check or the supporting documents provided by the third party, e.g. construction drawing of lagoon.				
5. No methane recovery and destruction by flaring, combustion or gainful use takes place in the baseline scenario.	In the baseline scenario, methane from the lagoon will be directly released into atmosphere without any recovery, destruction or utilization activity through the onsite check or the supporting documents provided by the third party.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No methane recovery and destruction takes place in the baseline scenario Therefore, this criterion is met. This will be checked for each CPA during the validation.
6. The residual waste from the animal manure management system shall be handled aerobically, otherwise the related emissions shall be taken into account as per relevant procedures of AMS-III.AO "Methane recovery through controlled anaerobic digestion". In case of soil application, proper conditions and procedures (not resulting in methane emissions) must be ensured;	The residual waste of the project will be handled aerobically and utilized as fertilizer, which will not result in methane emissions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The residual waste from the animal manure management system shall be handled aerobically. Therefore, this criterion is met. This will be checked for each CPA during the validation.
7. Technical measures shall be used (including a flare for exigencies) to ensure that all biogas produced by the digester is used or flared;	Biogas tank will be installed in each project activity to achieve that in case of emergency all methane produced from anaerobic digestion can be stored but not emitted to atmosphere, and therefore ensure that all methane produced by the digester is destroyed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Technical measures will ensure that all biogas produced by the project is used or flared Therefore, this criterion is met. This will be checked for each CPA during the validation..
8. The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester. If the project proponent can demonstrate that the dry matter content of the manure when removed from the animal barns is larger than 20%, this time constraint will not apply.	Manure collected will be cleaned and transferred into the anaerobic digesters as soon as possible, which usually does not exceed one day.				The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester.k Therefore, this criterion is met. This will be checked for each CPA during the validation..
9. Projects that recover methane from landfills shall use AMS-III.G "Landfill methane recovery" and projects for wastewater treatment shall use AMS-III.H. Project for composting of animal manure shall use AMS-III.F "Avoidance of	The project activities under the CPA do not involve landfill methane recovery, wastewater treatment, composting animal manure, or co-digestion of animal manure and other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project activities do not involve landfill methane recovery. Therefore, this criterion is met. This will be checked for each

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
methane emissions through composting". Project activities involving co-digestion of animal manure and other organic matters shall use the methodology AMS-III.AO "Methane recovery through controlled anaerobic digestion".	organic matters; therefore this is irrelevant.				CPA during the validation.
10. Different options to utilise the recovered biogas as detailed in paragraph 3 of AMS-III.H are also eligible for use under this methodology. The respective procedures in AMS-III.H shall be followed in this regard.	The recovered biogas will be used for generation of thermal, which belongs to option (a).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The recovered biogas will be used for thermal energy generation. Therefore, this criterion is met. This will be checked for each CPA during the validation.
11. New facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the "General Guidelines to SSC CDM methodologies".	Each project activity under the CPA is a newly built animal manure treatment system and they can meet the related and relevant requirements in the "General Guidelines to SSC CDM methodologies". The emission reduction sourced from methane recovery for each CPA will be lower than the threshold of 60,000 tCO ₂ e/yr. Therefore, the project is in line with "General Guidelines to SSC CDM methodologies".	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each project activity under the CPA is a newly built animal manure treatment system and will meet the requirements in the "General Guidelines to SSC CDM methodologies". Therefore, this criterion is met. This will be checked for each CPA during the validation.
12. The requirements concerning demonstration of the remaining lifetime of the replaced equipment shall be met as described in the "General Guidelines to SSC CDM methodologies".	Each project activity under the CPA is a newly built animal manure treatment system, thus this criterion is not relevant as replacement of equipment is not involved in a CPA under the PoA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built animal manure treatment system. Therefore, this criterion is met. This will be checked for each CPA during the validation.
13. Measures are limited to those that result in aggregate emission reductions of less than or equal to 60 kt CO ₂ equivalent annually from all Type III components of the project activity.	The emission reduction sourced from methane recovery for each CPA will be lower than the threshold of 60,000 tCO ₂ e/yr. Therefore, the project is in line with "General Guidelines to SSC CDM methodologies".	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The emission reductions from type III will be lower than the threshold of 60,000 tCO ₂ e/yr. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Table A-2-2: Methodology AMS-I.C

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
1. This category comprises renewable energy technologies that supply users with thermal energy that displaces fossil fuel use. These units include technologies such as solar thermal water heaters and dryers, solar cookers, energy derived from renewable biomass and other technologies that provide thermal energy that displaces fossil fuel.	The project activities under CPA will use the biogas collected from the anaerobic manure management system to generate thermal energy that displaces fossil fuel.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The recovered biogas will be used for thermal energy generation that displaces fossil fuel use. Therefore, this criterion is met. This will be checked for each CPA during the validation.
2. Biomass-based co-generating systems that produce heat and electricity are included in this category. For the purpose of this methodology "Cogeneration" shall mean the simultaneous generation of thermal energy and electrical and/or mechanical energy in one process. Cogeneration system may supply one of the following: a) Electricity to a grid; b) Electricity and/or thermal energy (steam or heat) for on-site consumption or for consumption by other facilities; c) Combination of (a) and (b).	N/A Co-generating systems is not involved in a CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Biomass-based co-generating systems are not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
3. Emission reductions from a biomass cogeneration system can occur from one of the following activities: a) Electricity to a grid; b) Electricity and/or thermal energy (steam or heat) for on-site consumption or for consumption by other facilities; c) Combination of (a) and (b).	N/A Co-generating systems is not involved in a CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Biomass-based co-generating systems are not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
4. The total installed/rated thermal energy generation capacity of the project equipment is equal to or less than 45 MW thermal.	The total installed capacity of each CPA under the PoA is less than 45 MW thermal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The total capacity of CPA will be less than 45 MW thermal. Therefore, this criterion is met. This will be checked for each CPA during the validation.
5. For co-fired systems, the total installed thermal energy generation capacity of the project equipment, when using both fossil and renewable fuel shall not exceed 45 MW thermal.	N/A This criterion is not relevant because each project activity under the CPA is heat generation based on biogas-fired. Co-fired systems are not involved in a	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Co-fired systems are not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
	CPA.				
<p>6. The following capacity limits apply for biomass cogeneration units:</p> <p>a) If the project activity includes emission reductions from both the thermal and electrical energy components, the total installed energy generation capacity (thermal and electrical) of the project equipment shall not exceed 45 MW thermal. For the purpose of calculating this capacity limit the conversion factor of 1:3 shall be used for converting electrical energy to thermal energy (i.e., for renewable project activities, the maximal limit of 15 MW(e) is equivalent to 45 MW thermal output of the equipment or the plant);</p> <p>b) If the emission reductions of the cogeneration project activity are solely on account of thermal energy production (i.e., no emission reductions accrue from electricity component), the total installed thermal energy production capacity of the project equipment of the cogeneration unit shall not exceed 45 MW thermal;</p> <p>c) If the emission reductions of the cogeneration project activity are solely on account of electrical energy production (i.e., no emission reductions accrue from thermal energy component), the total installed electrical energy generation capacity of the project equipment of the cogeneration unit shall not exceed 15 MW.</p>	<p>N/A</p> <p>Co-generating systems is not involved in a CPA.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Co-fired systems are not involved in this POA.</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>
<p>7. The capacity limits specified in the above paragraphs apply to both new facilities and retrofit projects. In the case of project activities that involve the addition of renewable energy units at an existing renewable energy facility, the total capacity of the units added by the</p>	<p>N/A</p> <p>The proposal for the CPA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Each project activity under the CPA is a newly built facility and will meet the requirements in the "General Guidelines to SSC CDM methodologies".</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
project should comply with capacity limits in paragraphs 4 to 6, and should be physically distinct from the existing units.					
8. Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category.	N/A The proposal for the CPA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.
9. New Facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the "General Guidelines to SSC CDM methodologies"	According to AMS-I.C as well as "General Guidelines to SSC CDM methodologies" and AMS-III.D, the total installed capacity of the CPA (for electricity capacity, multiply by 3 to derive thermal units as per the latest version of "General Guidelines to SSC CDM methodologies") is no more than 45MW _{th} .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each project activity under the CPA is a newly built facility and will meet the requirements in the "General Guidelines to SSC CDM methodologies". Therefore, this criterion is met. This will be checked for each CPA during the validation.
10. If solid biomass fuel (e.g. briquette) is used, it shall be demonstrated that it has been produced using solely renewable biomass and all project or leakage emissions associated with its production shall be taken into account in the emissions reduction calculation.	N/A The solid biomass fuel (e.g. briquette) is not involved in the CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solid biomass fuel is not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
11. Where the project participant is not the producer of the processed solid biomass fuel, the project participant and the producer are bound by a contract that shall enable the project participant to monitor the source of the renewable biomass to account for any emissions associated with solid biomass fuel production. Such a contract shall also ensure that there is no double-counting of emission reductions.	N/A The solid biomass fuel (e.g. briquette) is not involved in the CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solid biomass fuel is not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
12. In case electricity and/or steam/heat produced by the project activity is delivered to another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered into specifying that only the facility generating the energy can claim emission reductions from the	The supplier will sign contract with consumers to state that, only the supplier can claim emission reductions from the energy displaced.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A contract will be provided to specifying that only the facility generating the energy can claim emission reductions from the energy displaced. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
energy displaced.					
13. If the project activity recovers and utilizes biogas for power/heat production and applies this methodology on a stand alone basis i.e. without using a Type III component of a SSC methodology, any incremental emissions occurring due to the implementation of the project activity (e.g. physical leakage of the anaerobic digester, emissions due to inefficiency of the flaring), shall be taken into account either as project or leakage emissions.	N/A The type III component of a SSC methodology was adopted for the CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This methodology is not applied on a stand alone basis Therefore, this criterion is met. This will be checked for each CPA during the validation.

Table A-2-3: Methodology AMS-I.F

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to user(s). The project activity will displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit i.e., in the absence of the project activity, the users would have been supplied electricity from one or more sources listed below: a) A national or a regional grid (grid hereafter); b) Fossil fuel fired captive power plant; c) A carbon intensive mini-grid.	The project activities under CPA will use the biogas collected from the anaerobic manure management system to generate electricity, and the power will be used for captive use, the electricity generated by each activity will displace electricity from the power grid.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The recovered biogas will be used for electricity generation for captive use that displaces electricity imports from the power grid. Therefore, this criterion is met. This will be checked for each CPA during the validation.
2. For the purpose of this methodology, a mini-grid is defined as small-scale power system with a total capacity not exceeding 15 MW (i.e., the sum of installed capacities of all generators connected to the mini-grid is equal to or less	N/A This criterion is not relevant as a mini-grid is not involved in all activities included in each CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A mini grid is not involved in the POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
than 15 MW) which is not connected to a national or a regional grid.					
3. Project activities or project activity components supplying electricity to a grid shall apply AMS-I.D. Project activities for standalone off-the-grid power systems supplying electricity to households/users included in the boundary are eligible under AMS-I.A. According to the table 2 in the methodology, project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid), AMS-I.F can be adopted.	Electricity generated by each project activity under the CPA will be consumption for captive purpose, so it is applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The recovered biogas will be used for electricity generation for captive use. Therefore, this criterion is met. This will be checked for each CPA during the validation.
4. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: <ul style="list-style-type: none"> The project activity is implemented in an existing reservoir with no change in the volume of reservoir; The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m ² .	N/A This criterion is not relevant because each project activity under the CPA is power generation based on biogas-fired.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hydropower is not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
5. For biomass power plants, no other biomass other than renewable biomass are to be used in the project plant.	N/A No biomass other than biogas will be used in the project activities included in a CPA of the PoA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Biomass is not involved in this POA.. Therefore, this criterion is met. This will be checked for each CPA during the validation.
6. This methodology is applicable for project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity	All the project activities included in a CPA of the PoA are Greenfield plants. It belongs to the option (a).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
addition, (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).					
7. In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	N/A The proposal for the PoA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.
8. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	N/A This criterion is not relevant as all the project activities under the CPA are newly built plant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.
9. If the unit added has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	N/A The proposal for the PoA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.
10. Combined heat and power (co-generation) systems are not eligible under this category.	Combined heat and power (co-generation) systems is not involved in a CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Co-generation is not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
11. In case electricity produced by the project activity is delivered to another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the electricity will have to be entered into specifying that only the facility generating the electricity can claim emission reductions from the electricity displaced.	N/A The generated electricity is used by livestock farm itself and will not be delivered to another facility or facilities within the project boundary.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The recovered biogas will be used for electricity generation for captive use. Therefore, this criterion is met. This will be checked for each CPA during the validation.

Table A-2-4: Methodology AMS-I.D

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
<p>1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>(a) Supplying electricity to a national or a regional grid; or</p> <p>(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>	<p>The project activities under CPA will use the biogas collected from the anaerobic manure management system to generate electricity, and the power will be supplied to the power grid. It belongs to option (a).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The recovered biogas will be used for electricity generation which will be supplied to the power grid.</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>
<p>2. This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement³ of (an) existing plant(s).</p>	<p>All the project activities included in a CPA of the PoA are Greenfield plants. It belongs to option (a).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Each project activity under the CPA is a newly built facility.</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>
<p>3. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <ul style="list-style-type: none"> • The project activity is implemented in an existing reservoir with no change in the volume of reservoir; • The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m². 	<p>N/A</p> <p>This criterion is not relevant because each project activity under the CPA is power generation based on biogas-fired.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Hydropower is not involved in this POA.</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>
<p>4. If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit co-fires fossil fuel, the capacity of the entire unit shall not</p>	<p>N/A</p> <p>The proposal for the PoA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Each project activity under the CPA is a newly built facility.</p> <p>Therefore, this criterion is met. This will be checked for each CPA during the validation.</p>

Applicability Criteria	Situation of the CPA	met	not met	N/A	Assessment of validation team (results and means of assessment)
exceed the limit of 15 MW.					
5. Combined heat and power (co-generation) systems are not eligible under this category.	N/A Combined heat and power (co-generation) systems is not involved in a CPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Co-generation is not involved in this POA. Therefore, this criterion is met. This will be checked for each CPA during the validation.
6. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	N/A The proposal for the PoA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility.. Therefore, this criterion is met. This will be checked for each CPA during the validation..
7. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	N/A The proposal for the PoA is to install new facilities for biogas generation and utilization. Therefore, this applicability condition is not relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Each project activity under the CPA is a newly built facility. Therefore, this criterion is met. This will be checked for each CPA during the validation.

ANNEX 3: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-3: Assessment of Baseline Identification (VVS, v. 2.0 §§ 88 – 95)

<input checked="" type="checkbox"/>	Baseline is pre-defined by the methodology
<input type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	

ANNEX 4: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-4: Assessment of Financial Parameters (VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122,)

<input type="checkbox"/>	No financial parameters are used for additionality justification					
<input checked="" type="checkbox"/>	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
					<input type="checkbox"/>	
					<input type="checkbox"/>	

ANNEX 5: ASSESSMENT OF BARRIER ANALYSIS

Table A-5: Assessment of Barrier Analysis (VVS, v. 2.0, §§ 124-127)

<input checked="" type="checkbox"/>	No barrier parameters are used for additionality justification			
<input type="checkbox"/>	As per additionality justification at CPA level			
<input type="checkbox"/>	Assessment of barriers see below			
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			<input checked="" type="checkbox"/>	

ANNEX 6: OUTCOME OF THE GSCP

Table A-6: Outcome of the Global Stakeholder Consultation Process
(VVS Version 2.0, §§ 34- 37)

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period					
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Action taken by the validation team to take due account on the comment ^{*)}	Conclusion (incl. CARs CLs or FARs)

^{*)} In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 7: ELIGIBILITY CRITERIA ASSESSMENT

Table A-7: Assessment on Eligibility Criteria for inclusion of CPAs under this PoA

A full list shall be included in section B.2 of the PoA-DD and B.5 of the generic CPA-DD.

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
Geographical boundary	1. All the project activities under the CPA should be located in the boundary of the PoA, i.e. within Anhui Province or Jiangsu Province or Yunnan Province.	-- FSR --Business license	<input checked="" type="checkbox"/>	This criterion corresponds with paragraph 16 (a) EB 70 Annex 5. The location of each CPA will be clearly defined within the geographical boundaries of the PoA. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore, this criterion is deemed as appropriate and sufficient.
To avoid double counting	2. Each project activity implementer under the CPA should sign a contract with the CME to confirm that: (a) The project activity implementer are aware of and have agreed that their activity is being subscribed to the PoA; (b) The project activity have neither already been registered as a CDM project, nor as a CPA of another PoA.	-- The contract between the project activity owner and the CME to confirm that: (a) The project activity implementer are aware of and have agreed that their activity is being subscribed to the PoA; (b) The project activity have neither already been registered as a CDM project, nor as a CPA of another PoA.	<input checked="" type="checkbox"/>	This criterion corresponds with paragraph 16 (b) EB 70 Annex 5. The contact signed between the CME and the project owner will be provided during CPA inclusion. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore, this criterion is deemed as appropriate and sufficient.
SSC threshold	3. Every CPA in aggregate meets the small-scale criteria and remains within those thresholds throughout the crediting period of the CPA, i.e., The emission reductions from type III components of the CPA should be equal to or	--FSR or FSR approval; --Equipment brand/ nameplate; or --Equipment purchase	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16 (e) EB 70 Annex 5 and the requisition of a small scale project activity. Therefore, the proposed CPA is eligible to apply SSC methodologies as part of the small scale POA.

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	less than 60,000 tCO ₂ /y and the total installed/rated/added energy generation capacity of the CPA should be equal to or less than 15MW _{ele} /45 MW _{ther} .	contract; --CPA lists --ER Calculation worksheet;		The ER sheet and the equipment specifications will be available for each CPA during validation stage. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
De-bundling	<p>4. The proposed small-scale CPA is not a debundled component of a large scale activity, which may be a (i) registered small-scale CPA of a PoA, (ii) an application to register another small-scale CPA of a PoA or (iii) another registered CDM project activity, if the CPA will satisfy any of the conditions below:</p> <p>a. Doesn't have the same activity implementer as the proposed small scale CPA or doesn't have a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure;</p> <p>OR</p> <p>b. There is no any activity with the same sectoral scope, whose boundary is within 1km of the boundary of the proposed small-scale CPA.</p>	<p>--FSR; --Documents from local government; --Onsite Survey.</p>	<p><input checked="" type="checkbox"/></p>	<p>This criterion corresponds to paragraph 16 (l) EB 70 Annex 5. In line with <i>Guidelines on assessment of debundling for SSC project activities</i> (ver. 03,EB 54 Annex 13).</p> <p>The PoA database served by CME will available as well as the project information displayed on the UNFCCC website.</p> <p>It will be ensured that the CPA will not have</p> <ul style="list-style-type: none"> the same activity implementer as the proposed small scale CPA or coordinating / managing entity, which also manages a large scale PoA of the same technology measure, and; <p>AND</p> <ul style="list-style-type: none"> The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point. <p>The expected evidence at CPA inclusion stage is deemed appropriate. Therefore the EC is deemed sufficient and appropriate.</p>
The start date of the CPA	5. The start date of the project activities under the CPA, which is the earliest date among equipment purchase date, debt contract date and construction start date, are later than the PoA GSC start date (14/06/2012).	<p>--Equipment purchasing contract --Construction contract or construction start record</p>	<p><input checked="" type="checkbox"/></p>	<p>This criterion corresponds to paragraph 16 (d) EB 70 Annex 5. In line with EB 55 Annex 38 §7 (d) the CPA starting date cannot be prior to commencement of validation. The POA-DD has been made publicly available on 2012-06-14.</p> <p>The equipment or construction or other contracts will available at the time of validation. The start date of the CPA is defined as the earliest commitment to the financial expenditure of the CPA and is later than the 1st PoA GSP date.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
				The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore, this criterion is deemed as appropriate and sufficient.
The start date of the CPA	6. The PoA start date is 01/02/2013, or the submission date of the PoA, whichever is earlier, so the CPA crediting period does not exceed 31/01/2040 (the PoA end date)..	--CPA-DD	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 7(c) EB55 Annex 38. The crediting period must not extend beyond the end date of the Programme of Activities (PoA) to which it belongs.</p> <p>The information will be included in the CPA-DD and checked against the duration of the PoA.</p> <p>Therefore, this criterion is deemed as appropriate and sufficient.</p>
Additionality determination	<p>7. A CPA should meet any one of following criteria for assessing additionality:</p> <p>(a) Meets relevant requirements in paragraph 2(a) and paragraph 4(a) of the <i>Guidelines for demonstrating additionality of microscale project activities</i>, including:</p> <ul style="list-style-type: none"> ✓ The geographic location of the project activity is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone (SUZ) of the host country; ✓ The total installed capacity of the CPA is no more than 15MW_{ther}; ✓ The emission reductions from type III components of the CPA are no more than 20 ktCO₂e per year; <p>(b) Meets relevant requirement for the positive list of technologies and project activity types that are defined as automatically additional in paragraph 2(c) of the <i>Guidelines on the demonstration of additionality of small-scale</i></p>	<p>--ER worksheet</p> <p>--Income statement</p> <p>--IRR worksheet</p>	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16 (f) EB 70 Annex 5.</p> <p>The additionality will be sufficiently stated. The additionality will be appropriately shown, in line with PoA procedures (EB 55 Annex 38 and EB 70 Annex 5).</p> <p>The Emission reduction sheet of the CPA will calculate the actual emission reductions. the equipment specifications will be available at the time of validation. And the IRR calculation will give the relevant IRR value, if requested. The benchmark (after tax) of 7% is derived from Economic Evaluation Code for Construction of Project (ver.03) published by the NDRC and Ministry of Construction of P.R. China in 2006, the source is commonly used in China to determine the benchmark for industry region.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p> <p>Hence, the EC is deemed sufficient and appropriate.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	<p><i>project activities</i>", including:</p> <ul style="list-style-type: none"> ✓Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs); ✓The emission reductions from type III components of the CPA is no more than 3,000 tCO₂e per year; ✓The installed capacity of each unit in the activities included in the CPA is less than 2,250 kW_{th}. <p>(c) The project IRR (before tax) of the project included in the CPA is lower than the benchmark (project IRR before tax) of 7% according to the <i>Economic Evaluation Method and Parameter of Construction Projects</i> (3rd edition) for the stock farming as per paragraph 1(a) of the "Guidelines on the demonstration of additionality of small-scale project activities".</p>			
Funding from Annex I parties	8. The project activities under the CPAs are not sponsored by any funding from Annex I parties.	--Project approval or --Confirmation by the project implementer	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16 (h) EB 70 Annex 5. And it is also in line with EB55 Annex 38 §6(n), which says that a diversion of official development assistance is a violation of UNFCCC guidelines.</p> <p>The CME will provide a project approval and a confirmation from the project implementer.</p> <p>The expected evidence at CPA inclusion stage is deemed appropriate.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
Local stakeholder consultations and	9. Each project activities included in the CPA must have obtained approval of EIA.	--EIA and its approval	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16 (g) EB65 Annex 3, to ensure that an environmental analysis is conducted as per host country requirements.</p>

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria	Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
environmental impact analysis				An EIA will be provided for each activity within the CPA, as well as the official EIA approval. The expected evidence at CPA inclusion stage is deemed appropriate. Therefore the EC is deemed sufficient and appropriate.
To avoid double counting	10. Measures should be taken to avoid double counting of emission reductions for the CPA, like unique identifications of product and end-user locations (e.g. programme logo).	-- The contract between the project activity implementer and the CME to confirm that: (a) The project activity implementer are aware of and have agreed that their activity is being subscribed to the PoA; (b) The project activity have neither already been registered as a CDM project, nor as a CPA of another PoA.	<input checked="" type="checkbox"/>	This criterion corresponds with paragraph 16 (b) EB 70 Annex 5 and is deemed appropriate and sufficient to avoid double counting of emission reductions for a CPA inclusion. The unique number of the CPA will be identified in the PoA-DD and CPA-DD and the CME database. The contact signed between the CME and the project owner will be provided during CPA inclusion. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore, this criterion is deemed as appropriate and sufficient.
Technology/measure	11. All the project activities under the CPA are to install new anaerobic animal manure management systems to achieve methane recovery and destruction by flaring/combustion or gainful use of the recovered biogas.	-- FSR or FSR approval; --Technical flow figure	<input checked="" type="checkbox"/>	This criterion corresponds with paragraph 16 (c) EB 70 Annex 5. The specifications of technology/measure including the level and type of service are clearly stated. The FSR will state the relevant implementation information as well as the national standard to be complied with. The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
The applicability and other requirements of applied methodology	12. The CPA complies with applicability and other requirements of applied methodologies. - All relevant applicability criteria of methodology AMS-III.D shall be met; detailed analysis is conducted in section B.2 of Part II of PoA-DD. - Regarding the renewable part, there are four	--On-site photo or --FSR or FSR approval --EIA or EIA approval --History Record of livestock farms	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16 (e) EB 70 Annex 5. and the requirements of the applied methodologies AMS-III.D, AMS-I.C, AMS-I.F, AMS-I.D. Details will be provided in the CPA-DD.

PP Demonstration			DOE Assessment	
Category	Eligibility Criteria		Appropriate and sufficient	Explanation of final result
	scenarios for energy generation involved in the PoA as follows:			<p>The compliance with applicability and other requirements of the methodologies applied by the CPA is given.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p> <p>Therefore the EC is deemed appropriate and sufficient.</p>
	12.1.Scenario I The biogas produced by the project is used for supplying thermal energy that displaces fossil fuel use for livestock farms and /or households.	The CPA under scenario I will satisfy the applicability of Methodology AMS-I.C. , detailed analysis is conducted in section B.2 of Part II of PoA-DD.		
	12.2.Scenario II The biogas produced by the project is used for generating electricity for captive use that displaces electricity purchased from Power Grid.	The CPA under scenario II will satisfy the applicability of Methodology AMS-I.F. , detailed analysis is conducted in section B.2 of Part II of PoA-DD.		
	12.3.Scenario III The biogas produced by the project is used for supplying thermal energy that displaces fossil fuel use for livestock farms and/or households and for generating electricity for captive use that displaces electricity purchased from Power Grid.	The CPA under scenario III will satisfy the applicability of Methodology AMS-I.C and AMS-I.F. , detailed analysis is conducted in section B.2 of Part II of PoA-DD.		
	12.4.Scenario IV The biogas produced by the project is used for	The CPA under scenario IV will satisfy the applicability of Methodology AMS-I.D. ,		

PP Demonstration			DOE Assessment		
Category	Eligibility Criteria		Minimum Expected Evidence to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
	generating electricity delivered to Power Grid.	detailed analysis is conducted in section B.2 of Part II of PoA-DD.			

ANNEX 8: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL



Statement of Competence

Appointment and authorization according to the procedures of the TUV NORD JICDM Certification Program

Ms. Weiming Yu

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-09-13
VCS	Lead Assessor	2014-09-13

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
13.1	Waste Handling and Disposal

069 – Rev. 1, Date: 2011-09-14

069_001-F003_2011-09-14_rev1

001-F003 rev0 / 2010-04-19



Statement of Competence

Appointment and authorization according to the procedures of the TUV NORD JICDM Certification Program

Ms. Xuemei Li

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-10-25
VCS / ISO 14064-2	Lead Assessor	2015-10-25

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable energies
13.2	Animal Waste Management
15.2	Animal Waste Management

285 – Rev. 3, Date: 2012-10-26

285_001-F003_2012-10-26_rev3.doc

001-F003 rev2 / 2012-04-05



Statement of Competence

Appointment and authorization according to the procedures of the TUV NORD JICDM Certification Program

Ms. Jing Yi Wang

SCHEME	STATUS
CDM	Trainee
VCS / ISO 14064-2	Trainee

310 – Rev. 0, Date: 2012-05-15

310_001-F003_2012-05-15_rev0.doc

001-F003 rev2 / 2012-04-05

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JICDM Certification Program

Mr. Wei Wang

SCHEME	STATUS	VALID UNTIL
CDM	Applicant Trainee	
VCS / ISO 14064-2	Applicant Trainee	
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	
1.1	Thermal Energy Generation	

311 – Rev. 0, Date: 2012-04-06

311_301-F003_2012-04-06_m01.doc

301-F003 m02 / 2012-04-05

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JICDM Certification Program

Ms. Christina Stöhr

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-12-12
VCS / ISO 14064-2	Lead Assessor	2014-12-12
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Total

200 – Rev. 3, Date: 2012-07-05

200_301-F003_2012-07-05_m03.doc

301-F003 m02 / 2012-04-05

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JICDM Certification Program

Mr. Ulrich Walter

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification) Technical Reviewer	2014-12-08
J1	Lead Assessor Technical Reviewer	2014-12-08
VCS / ISO 14064-2	Lead Assessor Technical Reviewer	2014-12-08

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	
1.2	Renewable Energies	
2.1	Electricity Distribution	
2.2	Heat Distribution	
3.1	Energy Demand	
5.1	Chemical Process Industries	
11.1	Chemical Process Industries	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management
13.2	Animal Waste Management	
15.2	Animal Waste Management	

149 – Rev. 4, Date: 2012-02-27

149_301-F003_2012-02-27_m04.doc

301-F003 m02 / 2012-04-05

Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JICDM Certification Program

Mr. Dr. Jochen Schubert

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-05-11
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2014-05-11

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR INCLUDE SUB-AREAS
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Total
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management

056 – Rev. 2, Date: 2011-07-29

056_301-F003_2011-07-29_m02

301-F003 m02 / 2010-04-19