

RETROACTIVE GS CPA VALIDATION REPORT

**ALTERNATIVE ENERGY PROMOTION
CENTRE (AEPC)
ATMOSFAIR GMBH**

CPA Number and Title

NEPAL BIOGAS SUPPORT PROGRAM - CPA 1: 20,000 DIGESTERS.

NEPAL BIOGAS SUPPORT PROGRAM - CPA 2: 19,927 DIGESTERS

NEPAL BIOGAS SUPPORT PROGRAM - CPA 3: 19,959 DIGESTERS.

NEPAL BIOGAS SUPPORT PROGRAM - CPA 4: 19,970 DIGESTERS.

PoA Title:

NEPAL BIOGAS SUPPORT PROGRAM-POA

Report No: 8000447189 - 15/068

Date: 2015-11-16

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Validation Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.		
	8000447189 - 15/068	1	2015-06-08	2015-11-16		
PoA Title:	Nepal Biogas Support Program-PoA (GS3110)					
CPAs	Title	GS No	Initial CPA Passport Version	Final CPA Passport Version		
	Nepal Biogas Support Program - CPA 1: 20,000 digesters	GS3109	2014-10-01 (version 1.0)	2015-10-22 (version 3.0)		
	Nepal Biogas Support Program - CPA 2: 19,927 digesters.	GS3113				
	Nepal Biogas Support Program - CPA 3: 19,959 digesters.	GS3114				
	Nepal Biogas Support Program - CPA 4: 19,970 digesters	GS3116				
Project CPA-DD	Title	Initial CPA-DD Version		Final CPA-DD Version		
	Nepal Biogas Support Program- CPA 1: 20,000 digesters.	-		2013-01-13		
	Nepal Biogas Support Program- CPA 2: 19,927 digesters.			2014-02-05		
	Nepal Biogas Support Program- CPA 3: 19,959 digesters.			2014-02-05		
	Nepal Biogas Support Program- CPA 4: 19,970 digesters.			2014-02-05		
Involved Parties	Host Party	Other involved Parties				
	Nepal	Germany				
CME and Project Participants	Involved Entities/Roles	CME:	Project Participant			
	Alternative Energy Promotion Centre (AEPIC)	Yes	Yes			
	atmosfair gGmbH	-	Under application			
Applied methodology(ies):	Title:	No.:	Scope/TA:			
	Switch from Non-Renewable Biomass for Thermal Applications by the User	AMS-I.E. ver. 4	1/1.2			
Validation team / Technical Review and Final Approval	Validation Team:	Technical review:	Final approval:			
	Indrapal Parmar (TM/TE) Pankaj Patel (TL) G. Ezhilarasu (TM/TE) B. J. Mohinder Amarnath (TM/TE)	Christina Stöhr (OR) Stefan Winter (TR)	Stefan Winter (FA)			
Real Case Details	Expected emission reductions over the first crediting period:	(expected) starting date of CPA crediting period	CPA Crediting Period:			
	61,510 tCO ₂ e (for CPA 1) 66,236 tCO ₂ e (for CPA 2) 66,329 tCO ₂ e (for CPA 3) 66,397 tCO ₂ e (for CPA 4)	After 31/01/2013 ¹ 08/05/2014 08/05/2014 08/05/2014	7 years			
Summary	☒ Positive Validation opinion ☐ Negative Validation opinion					
Summary of Validation Opinion:	In detail the conclusions can be summarised as follows: - Each CPA is in line with all relevant host country criteria (Nepal) and all relevant Gold standard requirements. - All eligibility criteria established for each CPA inclusion in the PoA-DD and POA passport have been sufficiently fulfilled. - Each carbon monitoring plan and sustainability monitoring plan is transparent and adequate - The baseline has been appropriately identified for each CPA as per the applied methodology. - The framework for determination project additionality is sufficiently justified in each CPA-DD in line with the POA-DD and the POA passport.					

¹ The CDM crediting period starts on 31 Jan 2013. GS crediting period will start two years backwards from GS registration date.

	- Information on the local stakeholders' consultation by the project participants prior to submitting the CPAs for validation are sufficiently provided in each CPA-DD and each CPA passport which is in line with POA-DD and the POA passport. - The calculation of each CPA is carried out in a transparent and conservative manner, so that the calculated emission reductions of 61,510 tCO₂e (for CPA 1), 66,236 tCO₂e (for CPA 2), 66,329 tCO₂e (for CPA 3) and 66,397 tCO₂e (for CPA 4) are most likely to be achieved within the first renewable crediting period. - Information on the environmental impact analysis of each CPA is sufficiently provided in the CPA-DDs and the CPA passports, which is in line with POA-DD and POA passport. - The CPA "Nepal Biogas Support Program- CPA 1: 20,000 digesters", "Nepal Biogas Support Program - CPA 2: 19,927 digesters", "Nepal Biogas Support Program - CPA 3: 19,959 digesters" and "Nepal Biogas Support Program - CPA 4: 19,970 digesters" shall be included in the PoA "Nepal Biogas Support Program- POA"				
Document information:	<table> <tr> <td data-bbox="467 786 1230 819"><i>Filename:</i></td><td data-bbox="1230 786 1410 819"><i>No. of pages:</i></td></tr> <tr> <td data-bbox="467 819 1230 857">2015-06-03 FValR_CPA 1-4.docx</td><td data-bbox="1230 819 1410 857">75</td></tr> </table>	<i>Filename:</i>	<i>No. of pages:</i>	2015-06-03 FValR_CPA 1-4.docx	75
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Abbreviations

AEPC	Alternative Energy Promotion Centre
BAU	Business as usual
BSP	Nepal Biogas Support Program-POA
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 Entities
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GS	Gold standard
GSCP	Global Stakeholder Consultation Process
IPCC	Intergovernmental Panel on Climate Change
LSC	Local Stakeholder Consultation
NRB	Non Renewable Biomass
PA	Project Activity
PoA	Programme of Activities
PoA-DD	CDM Programme of Activities Design Document
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 CPA validation is to have an independent third party assess the component project activity (CPA) design and compliance with the GS requirements as described in the Gold Standard documentation and supporting documents by the client. In particular the CPA's baseline, the monitoring plan (MP), and its 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
- subsequent decisions made by COP/MOP & CDM Executive Board and
- GS Requirements; GS Methodologies; GS Toolkit and its Annexes
- Any other decision taken by the Technical Advisory Committee of GS
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the CPA 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 CPA design, information that is included in the PDDs 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 CPA-DD and the supporting documents were 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 CPA with the key areas as outlined in section 7 and 8.5 of the VVS ver.7.0.

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 project design.

2 GHG CPA DESCRIPTION

2.1 CPA Characteristics

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

Table 2-1: CPA Characteristics

Item	data			
CPA number and title	Nepal Biogas Support Program- CPA 1: 20,000 digesters	Nepal Biogas Support Program- CPA 2: 19,927 digesters	Nepal Biogas Support Program- CPA 3: 19,959 digesters	Nepal Biogas Support Program- CPA 4: 19,970 digesters
PoA title	Nepal Biogas Support Program-POA			
PoA registration number (if applicable):	UNFCCC Ref. No. 9572			
CPA Host Country / Region:	Nepal			
CPA Implementer (Name / Address)	Alternative Energy Promotion Centre (AEPC)			
CPA Location	The digesters in CPA-1, CPA-2, CPA-3 and CPA-4 are located at various locations across Nepal			
Geographic reference (in case of stationary CPA)	CPA Database maintained by BSP Nepal indicates digester code, address and GPS coordinate.			
Other means of identification (in case of mobile CPAs, such as registration number, GPS devices)	Refer above section			
CPA size	☐ Large Scale ☒ Small Scale			
CPA Scope (according to UNFCCC sectoral scope numbers for CDM)	☒	1	Energy Industries (renewable- /non-renewable sources)	
	☐	2	Energy distribution	
	☐	3	Energy demand	
	☐	4	Manufacturing industries	
	☐	5	Chemical industry	
	☐	6	Construction	
	☐	7	Transport	
	☐	8	Mining/Mineral production	
	☐	9	Metal production	
	☐	10	Fugitive emissions from fuels (solid, oil and gas)	
	☐	11	Fugitive emissions from production and consumption of halocarbons and hexafluoride	
	☐	12	Solvents use	
	☐	13	Waste handling and disposal	
	☐	14	Afforestation and Reforestation	
	☐	15	Agriculture	
	☐	16	Carbon capture and storage of CO ₂ in geological formations	
Applied Methodology(ies) title and version	AMS-I.E. ver. 4 - Switch from Non-Renewable	AMS-I.E. ver. 5 - Switch from Non-Renewable	AMS-I.E. ver. 5 - Switch from Non-Renewable	AMS-I.E. ver. 5 - Switch from Non-Renewable

Item	data			
	Biomass for Thermal Applications by the User	Biomass for Thermal Applications by the User	Biomass for Thermal Applications by the User	Biomass for Thermal Applications by the User
PoA Duration	28 years			
Start date of the PoA	The start date of the PoA has been defined as 22/06/2007, based on installation date of first system under this PoA			
End date of the PoA	End date of the PoA is taken as 21/06/2035			
PoA-DD GSCP date	Starting date of the global stakeholder consultation process: 22/12/2009			
Starting date of the CPA	22/06/2007	19/03/2009	10/03/2010	20/02/2011
CPA Crediting period	☒ Renewable Crediting Period (7 y) ☐ Fixed Crediting Period (10 y)			
Start of crediting period of the CPA	31 Jan 13	08 May 14	08 May 14	08 May 14
Estimated CPA emission reductions over the first crediting period [tCO _{2e}]	61,510 tCO _{2e}	66,236 tCO _{2e}	66,329 tCO _{2e}	66,397 tCO _{2e}

2.2 Involved Parties, Coordinating / managing entity(ies), program 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 the Entity/ies	Private or Public	CME
Host Country/ies	Alternative Energy Promotion Centre (AEPIC)		☒
Annex 1 country	atmosfair gGmbH	private (under application)	☐

2.3 Technical CPA Description

The CPA-1, CPA-2, CPA-3 and CPA-4 registered under the PoA involve the implementation of household biogas applications at individual household across various locations in Nepal. These applications displace firewood with biogas from animal waste and human excreta. The biogas is used as a fuel for cooking. Following the methodological guidance under Programme of Activities (PoA), only the replacement of non-renewable biomass (NRB) is counted as emission reduction under the CPA-1, CPA-2, CPA-3 and CPA-4 of the project.

Target group under the BSP are rural households who currently use non-renewable biomass (firewood). The BSP is centrally managed by Alternative Energy Promotion

Centre (AEPC) with the support of Biogas Sector Partnership Nepal (BSP-NEPAL), the implementing agency of the AEPC.

The information presented in the registered CPA-1, CPA-2, CPA-3 and CPA-4 and PoA documents on the technical design is consistent with the actual planning and implementation on-site. Validation team has done on-site visit^{/PHOTO/IM/} to the place where the associated real case CPA are being implemented and done interview with relevant stakeholder and personnel to confirm the technical specification of biodigesters is correct and consistent across all CPA's.

In conclusion, validation team confirms that the PoA project description for CPA-1, CPA-2, CPA-3 and CPA-4 are sufficiently accurate and complete in order to comply with the requirements of the CDM/GS.

The technical key data are provided in table 2-4 below

Table 2-4: Technical data of the biodigester installed in CPA-1, CPA-2, CPA-3 and CPA-4

Parameter	Unit	Value
Model No. of Bio-Digester	n/a	GGC 2047
Capacity of Bio-Digester	m ³	2, 4, 6, 8 and 10
Type of Bio-Digester	n/a	closed underground container made of concrete or other materials
CPA's start of operation:	First digester of CPA 1 implemented on 22/06/2007 First digester of CPA 2 implemented on 19/03/2009 First digester of CPA 3 implemented on 10/03/2010 First digester of CPA 4 implemented on 19/02/2011	

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the CPA consists of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- A desk review of the CDM-SSC-CPA-DD^{/CPA/} and supporting documents
- Validation planning,
- On-Site assessment, if applicable
- 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 CPA 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, consistent of one team leader and x additional team members, as well as 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
☒ Mr. ☐ Ms.	Pankaj Patel	TUV India Pvt. Ltd.	TL	LA	☒	-	☒	☐
☒ Mr. ☐ Ms.	Indrapal Parmar	TUV India Pvt. Ltd.	TM ^{A)}	LA	☒	1.2	☒	☒
☒ Mr. ☐ Ms.	Govindarajan Ezhilarasu	TUV India Pvt. Ltd.	TM ^{A)}	SA	☒	1.2	☒	☒
☒ Mr. ☐ Ms.	B. J. Mohinder Amarnath	TUV India Pvt. Ltd.	TM ^{A)}	LA	☒	1.2	☒	☐
☐ Mr. ☒ Ms.	Christina Söhr	TÜV Nord Cert GmbH	OR ^{B)}	LA	☒	-	☐	-
☒ Mr. ☐ Ms.	Stefan Winter	TÜV Nord Cert GmbH	TR/FA ^{B)}	SA	☒	1.2	☐	-

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 project 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 project 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 5 of this report.

3.4 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 pre-validating the identified

criteria. The validation protocol reflects the GS requirements as well as PoA and CPA specific issues which have to be met by the PoA and the proposed CPAs. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CPA 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 as 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 topic and the individual project activity.</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 covered in this section.</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 refers to the draft validation stage.</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

Figure 1: Validation protocol table

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

3.5 Review of Documents

The CPA-DDs and the GS passports and supporting background documents related to the GS programme activity design and baseline were reviewed.

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

3.6 Follow-up Interviews

The validation team has carried out interviews in order to assess the information included in the programme documentations and to gain additional information regarding the compliance of the CPAs with the relevant criteria applicable for GS.

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 Participants (PPs), Cooperating Managing Entity (CME), CPA operators representatives Project consultants Stakeholders (local farmers)	- Chronological description of the CPAs with documents of key steps of the implementation. - Current status of CPAs design - Technical details of the CPAs realization, CPAs feasibility, designing, operational life time, monitoring of the CPAs - Host Government Approval, if applicable - Approval procedures and status - Monitoring and measurement equipment and system - Financial aspects - Crediting period - CPA activity starting dates - CER allocation / ownership - Baseline study assumptions - Additionality - Sustainable development issues - Monitoring of CPAs - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. CPA management, monitoring and reporting - National Legislation - Editorial issues of the CPA -DDs

A comprehensive list of all interviewed persons is part of section 8 'References'.

3.7 Project comparison

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

- CPA technologies
- Eligibility issues
- Reasons for requests for reviews and rejections within the GS registration process.

3.8 Resolution of Clarification and Corrective Action Requests

3.8.1 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 on the programme results,
- the requirements deemed relevant for validation of the CPA with certain characteristics have not been met or
- there is a risk that the programme 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 programme implementation should be reviewed during the first verification of each CPA.

3.8.2 Draft Validation

After reviewing all relevant documents and taken 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 participants in order to respond on the issues raised and to revise the CPAs documentations accordingly.

3.8.3 Final Validation

The final validation starts after receiving the proposed corrective actions (CAs) to the CARs, CLs and FARs from the project participant. The CME 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 participant 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 of each CPA. 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 participant 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.

This CPA validation report includes information regarding how TÜV NORD has determined that the CPAs are eligible for inclusion under the PoA.

3.9 Technical review / internal quality control

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 these CPAs 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.

3.10 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

The following table the findings from the desk review of the CPA's, 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
CDM-CPA-DD			
General Description of the Component Project Activity - Title of the proposed or registered PoA - Title of the CPA - Description of the CPA - Entity/individual responsible for CPA - Technical Description of the CPA - Party(ies) - Geographic reference - Duration of the CPA - Choice of the crediting period - Start date of the crediting period - Length of the crediting period - Estimated amount of GHG emission reductions - Public Funding of the CPA - Debundling of SSC CPAs - Confirmation for CPA	01	0	0
Environmental Analysis - Analysis of the environmental impacts - Environmental impact assessment (LSC only)	03		
Local Stakeholder comments - Solicitation of comments from local stakeholders - Summary of comments received - Report on consideration of comments received	01		
Eligibility of CPA and Estimation of Emission Reductions - Title and reference of methodology(ies) selected - Application of methodologies - Sources of GHGs - Description of the baseline scenario - Demonstration of eligibility	01	0	0

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
- Estimation of Emission Reductions - Application of the monitoring methodology and description of the monitoring plan			
Approval and Authorization (CPA-E)	0	0	0
Other aspects (CPA-F): - Information displayed in the appendixes - CPA-DD editorial aspects	0	0	0
SUM	06	0	0

¹⁾ The letters in brackets refer to the validation protocol

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: ODA Declaration		CAR 1.1	
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Scanned copy of the Official Development Assistance Declaration statement signed by the project owner is not given in CPA passport. Submit the same to Validation team. GS Rules & Toolkit-Annex D		
Corrective Action #1	The ODA declaration was submitted.		
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>	PP has provided the ODA Declaration latter to the validation team has confirmed that no ODA from Annex 1 country will be diverted to the CPA implementation, which is in line with the GS/UNFCCC requirements. Besides, no bilateral or multilateral funds have been identified as involved in the PoA. However the revised GS Passport doesn't contain any ODA declaration in CPA GS Passport nor the link. CAR is open.		
Corrective Action #2	A copy of the ODA declaration was introduced under annex 1 of the CPA GS passport.		
DOE Assessment #2	ODA declaration is now included in revised GS CPA passport. ODA letter is checked by validation team and found to be OK. As the project is located in a country part of the OECD Development Assistance Committee's OD recipient list, the project participant has provided an ODA Declaration Form as part of documents to be submitted as per GSV2.2, Annex D. ODA Declaration Form provided in Annex D of the Toolkit with the Project Design Document in connection with validation is checked and found to be		

Finding: ODA Declaration		CAR 1.1
	signed.	CAR is closed now.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Finding: 'Do no harm' assessment		CAR 4-1
Classification	☒ CAR	☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	1. Have the Project participants discussed all of the safeguarding principles with the stakeholders. Submit the evidence to conform to the requirement GS Toolkit-2.4.1. 2. As per comments from GS PFA review regarding safeguarding principles need to be addressed; as for some of the SP's (like for serial no.2, 3, 6, 7, 8, 9 and 10) reference or source cited is/are missing. (GS Toolkit-3.5.1)	
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. Principles were discussed in a general manner, mainly in the context of the blind SD exercise (like SP 8 and 9 on working conditions and environmental protection). Detailed discussion one by one has proven in previous LSC meeting to be far complex and extensive to discuss with local stakeholders and would distract attention from more important points such as the SD matrix. 2. Evidence provided for all safeguarding principles in CPA passports.	
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. Clarification is requested as if same were discussed with the stakeholders during the stakeholder feedback round. If so, there is any evidence for the same. CAR is open. 2. Revised LSC report is not submitted for the said correction made by for the safeguarding principles cited by DoE. CAR is open.	
Corrective Action #2	1. The discussion of safeguarding principles is part of the GS passport, made publically available under https://www.atmosfair.de/en/nepal-biogas The link was sent to stakeholders invited for the SFR. 2. The LSC report was updated, the table on safeguarding principles in section D.1.i was replaced by the revised version contained in the latest PoA and CPA GS passport.	
DOE Assessment #2	1. Information safeguarding principles as part of the GS passport is publically available on atmosfair website which was informed and accessible to stakeholders invited for Stakeholder Feedback Round (SFR)^{/SFR/}. Therefore, it is concluded by validation team that all eleven principles has	

Finding: 'Do no harm' assessment		CAR 4-1
	been considered in conducting the 'Do No Harm' Assessment under the Gold Standard's Sustainability Assessment. CAR is closed. 2. Revised LSC report ver. 3.0 dated March 2015 now included all the safeguarding principles as part 'Do No Harm' Assessment. Description of their relevance to the project and mitigation measures correctly justified in line with the information included in PoA GS passport ver.4.0 and CPA passports. CAR is closed.	
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Finding: Sustainable Development matrix		CAR 4-2	
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	- MDGs have been described in the GS Passport however, for "Balance of payment and investment and Indicator Technology transfer and technological self-reliance did not include the relevance MDG. Also, Justification is missing against the indicators like "Balance of payments and investment"; "Technology transfer and technological self-reliance" (GS Toolkit-2.4.2) - Clarify if the SD matrix was filled by the stakeholders during the Local Stakeholder Consultation. (GS Toolkit-2.4.2) - Clarification is requested if the blind exercised was performed during the 2nd round stakeholder consultation - As per GS requirement SD scoring should be reproducible and verifiable. However, In CPA and PoA passport all the scoring of the SD indicators should be supported with quantitative data when possible e.g. publicly available and easily accessible reference sources (with page numbers, if applicable) for all justification paragraphs, regardless of the score. (GS Toolkit-3.5.1)		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	- MDG relevance was added. - As described in the LSC report, C.3 i.6, "The matrix was projected and the indicators were explained and discussed one by one. This session was very interactive and mainly the biogas users' participated to dig out the impact of the technology on the particular sustainable development indicator. For each indicator, first different opinions were heard, and then it was decided on the final scoring in plenary." - The blind exercise was performed during the GS LSC meeting in Kavre on August 15th 2014. - Evidence was added to the justification table below the SD matrix.		
DOE Assessment #1	Section F.2 of the revised CPA passports now includes relevance to achieving MDG for the indicator cited by validation team in the		

Finding: Sustainable Development matrix		CAR 4-2
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.	finding. Justification clearly indicates that the preliminary score is zero for both the indicators as they didn't have direct impact. CAR is closed. 2. However, clarification is requested if there is any evidence for the interaction done or for that matter minutes of meeting to address the purpose of Sustainable Development and its Monitoring as required by GS Toolkit-2.4.2. CAR is open. 3. Blind exercise is conducted on 15/08/2014 by client. There were only slight differences in the blind sustainable development exercise and own sustainable development matrix. Same is clearly and transparently explained in section D.2 of the LSC report. CAR is closed. 4. Revised passport now includes the appropriate justification along with the reference to ensure that the SD score is clearly reproducible and verifiable. CAR is closed now.	
	Corrective Action #2 2. A picture showing the projected empty SD matrix during the meeting was sent to the DOE, in order to substantiate the minutes of the LSC report, section C.3.i.6 : <i>"As per the requirement of the Gold Standard, a blind sustainable development exercise was conducted with the participation of all the stakeholders present in the meeting. The matrix was projected and the indicators were explained and discussed one by one."</i>	
DOE Assessment #2	Screenshot of the Sustainability development matrix discussed during the local stakeholder consultation (LSC) meeting^{/E-FROM/} which was organized on 15/08/2014 is submitted to validation team. Supporting evidences like photos, attendances etc are checked^{/PHOTO/} by validation team to ensure that a blind sustainable development exercise was conducted with the active participation of all the stakeholders present in the meeting. This is in compliance to GS guideline via Toolkit 2.6, 2.6.1, 2.6.2, Annex W and Annex J. Information w.r.t to same is now updated in revised CPA passport submitted. CAR is closed.	
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Finding: Assessment of stakeholder comments		CAR 6-1
Classification	☒ CAR ☐ CL	☐ FAR
Description of finding Describe the finding in unambiguous style; address the context (e.g. section)	1. Summary of alterations based on stakeholders comments is missing in section C.3 of LSC report (GS Rules & Toolkit Annex R, E.1) 2. Under section B for design of Stakeholder Consultation Process iii. Invitation tracking table is given in LSC report. Submit the	

Finding: Assessment of stakeholder comments	CAR 6-1
	evidence against the milestone given in the table (GS Toolkit-3.5.1) - Non-technical summary^{/E-Form/} is given in English language in the LSC report. However, same in local language is not given. Clarification is request for the same. (GS Toolkit-3.5.1) - Submit the stakeholder evaluation forms available with the PP (GS Toolkit-3.5.1).
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	- As mentioned in the table in section C.3.III, the comments have been taken into account, however they did not lead to considerable changes of the programme; therefore this section was left in blank. - Evidence on invitations, as already uploaded to the GS registry, was sent to the DOE. - The Non-technical summary was provided to stakeholder in a bilingual version, same is sent to the DOE. - Evaluation forms were sent to the DOE.
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>	- Justification is accepted. However, the relevant section of the LSC report is not revised/updated to include the said interpretation as given in the reply. CAR is open. - Link of the GS can included in the LSC report for easier reference of third reader. CAR is open. - Document "Non-Technical Summary of PoA bilingual.pdf"^{/E-Form/} is now submitted to validation team. Non-technical summary is checked and found to be mutually consistent with the information included in the LSC report. CAR is closed. - LSC evaluation form^{/E-Form/} conducted by BSP Nepal for the said PoA is now submitted. Original as well as translated copies of the forms are checked by validation team. The minutes of physical meetings and consultations are included in Section C.3 of the LSC report. According to the comments from the local stakeholders, all the participants understood the biogas digester operation and national biogas programme of BSP Nepal .Validation team has interviewed the participants in the local stakeholder interview in during the on-site visit. In addition, the overall comments are supportive to the biogas programme, and showed the interest to install biogas digesters if they could obtain the financial support from the project activity. CAR is closed.
Corrective Action #2	- The explaining section was added to the LSC report section C.iii - It was requested to the GS to make the document publically available under: https://mer.markit.com/br-reg/public/master-project.jsp?project_id=103000000002045 The link was included in the LSC report section C.1
DOE Assessment #2	- Section C.iii of the LSC report ver.3.0 is now revised to include the information on assessment on stakeholder comments. - Link is checked by validation team and ensures that the documents are uploaded to GS registry and publically available

Finding: Assessment of stakeholder comments		CAR 6-1
	on GS webpage. Nonetheless, the link is also included as part of LSC report which is checked by validation team and found OK. CAR is closed.	
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Finding: Sustainability Monitoring Plan		CAR 8-1
Classification	☒ CAR	☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	- Mitigation actions are left blank for some of the SD indicators (e.g. for "Soil Condition") monitoring plan (GS Toolkit-2.4.3). Confirm if all the mitigation measures put in place to prevent the risk of violating a Safeguarding Principle of the 'Do No Harm' Assessment. - For SD parameters, the "Estimation of baseline situation of parameter"; "current situation of parameter" and "future target for the parameter" is not explained clearly. Also basis of stating the information is not evidenced. (GS Toolkit-2.4.3) - As explained in Sustainability monitoring plan it is not clear about who will monitor like Survey will be basis or else (GS Toolkit-3.5.1)	
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	- Only for a single safeguarding principle, referring to working safety (N. 8), a mitigation measure is required. In the SD monitoring plan on the indicator "quality of employment", it was included: "In order to avoid the risk of accidents, workers will receive proper training. Protective equipment such as gloves will be distributed." Since all other Safeguarding principles are scored with a low relevance to the project, no further mitigation measures need to be put in place. - Parameter explanations were specified and substantiated in passport document - Details on monitoring surveys were added under "way of monitoring" for the relevant indicators, specifying that randomly selected households will be checked /interviewed by a dedicated monitoring team under responsibility of the CME.	
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>	Justification submitted by client is accepted as the project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. This is only mitigation measure (Sr. No. 8) for 'Do no harm' Assessment'. The validation team considers the "Do no harm" assessment has been based on the real project situation and the corresponding mitigation measures and references are included in the PoA and CPA GS Passport. Detailed assessment has been applied to establish the sustainable development matrix in Section F.2 of the PoA and	

Finding: Sustainability Monitoring Plan		CAR 8-1
	CPA GS Passport. In addition, the discussion of Millennium Development Goals is now included in the sustainable development matrix. CAR is closed. 2. Section G of the revised PoA and CPA passport is updated with respect to "Current situation of parameter"; "Estimation of baseline situation of parameter" and "Future target for parameter". Section G is checked by validation team and found to be correct and appropriate. The validation checked the revised POA and CPA GS Passport, in which all non-neutral indicators from the matrix as well as indicators are included in the SD monitoring plan. Since there is no negatively scored indicator, it is not required to monitor the mitigation or compensation measures. CAR is closed. 3. Section G of the revised PoA and CPA GS passport is now revised to include the information "who"; "when"; "how" aspect ways of monitoring. A dedicated monitoring team under responsibility of the CME will be responsible for the SD monitoring plan. Revised PoA and CPA GS passport is checked by validation team and found to correct and OK. CAR is closed.	
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed	

Finding: Sustainability Monitoring Plan			CAR 8-2
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding Describe the finding in unambiguous style; address the context (e.g. section)	Clarification is request on following SD indicators included in section G of the PoA and CPA passport: 1. Air Quality: Is there any research report on IAP (Indoor Air Pollution) data to ensure improvement in IAP (Indoor Air Pollution) as indicated by using the biogas as cooking fuel compared with the baseline fossil fuel. 2. Soil Condition: How it is ensured by PP that bio-slurry would not cause any adverse impact on soil condition. Is there any measurement of usage of bio-slurry obtained from the biogas digesters to reflect the improvement in soil condition? 3. Water Quality: How it is ensured by PP that the water collected will be treated by the biogas digester rather than discharging to the nearby water bodies without treatment.		
Corrective Action #1 This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.	1. A reference to a scientific study was added to the justification table: Sample et al: Switching to biogas – What effect could it have on indoor air quality and human health? Biogas and Bioenergy, Volume 70, November 2014, Pages 125–129 http://www.sciencedirect.com/science/article/pii/S0961953414000798 2. A link to a scientific study was added to the justification table.		

Finding: <i>Sustainability Monitoring Plan</i>	CAR 8-2
	Slurry is found to be preferable in comparison to raw manure, since it is already digested. Therefore, negative effects in comparison to the baseline scenario can be discarded. Nasir et al.: Comparative study of biogas slurry with farmyard manure as fertilizer on maize crop. Sci.Int(Lahore),22(4),297-301 http://r.search.yahoo.com/_ylt=A9mSs2b_hbdUrnAA9ykzCQx.;_ylu=X3oDMTBydWpobjZIBHNIYwNzcgRwb3MDMQRjb2xvA2lyMgR2dGlkAw--/RV=2/RE=1421342335/RO=10/RU=http%3a%2f%2fwww.sci-int.com%2fpdf%2f205297553012-Reseach%2520paper%2520mahmood%2520297-301.pdf/RK=0/RS=nmf0LRc80Tx7_QZ3v5xBX3RxCFU- 3. There will be no water flowing out of the digester since water will be contained in the slurry which is used a fertilizer and environmentally friendlier than the raw manure.
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. Reference cited by PP cannot be opened. If PDF file^{/Biogas/} is with PP kindly submit to check the cited information in page 125-129. CL Open 2. Link submitted by PP doesn't seem to be working. Kindly Check or submit the PDF file of the same. CL Open 3. Justification submitted by PP is accepted. Also, as found during on-site interview with the representative of CME, and also operation of biogas digesters, the validation team confirms that the operation of biogas digesters does not involve the extra water usage, the water collected will be treated by the biogas digester rather than discharging to the nearby water bodies without treatment. Thus the programme activity would not cause negative impact to the water quality and quantity, and the preliminary score is confirmed to be "0". CL closed.
Corrective Action #2	1. and 2. Both articles were provided to the DOE as pdf files.
DOE Assessment #2	Both the reference of scientific study^{/Biogas/} is now submitted to validation team. Same is checked by validation team to confirm that the use of biogas as cooking fuel surly leads to indoor air quality improvement and health of human. Further, slurry release from the biogas units is considered to be an effective fertilizer and soil conditioner; therefore would not have any adverse impact on soil condition. CAR is closed now.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed

5 GOLD STANDARD (GS) CRITERIA

5.1 Project type eligibility screen

CPA 1, CPA 2, CPA 3 and CPA 4 are part of the Nepal Biogas Support Program-POA (BSP). The Nepal Biogas Support Program – PoA is already registered under CDM^{/poa/}. Furthermore CPA 1, CPA 2, CPA 3 and CPA 4 are also already included in the POA under CDM.

Target group under the BSP are rural households who currently use non-renewable biomass (firewood). The BSP is centrally managed by Alternative Energy Promotion Centre (AEPIC) with the support of Biogas Sector Partnership Nepal (BSP-NEPAL), the implementing agency of the AEPIC. AEPIC is a public entity that executes all renewable/alternative energy programs in Nepal including BSP. Its main objectives are disseminating and promoting renewable energy technologies and mitigating environmental degradation. AEPIC is responsible for administering the government subsidy, coordination with all relevant stakeholders and monitoring BSP-NEPAL. AEPIC is the coordinating and managing entity of this PoA.

AEPIC is responsible for overall coordination and the implementation of all CPAs. Each biogas digester household under the CPA's agrees by contract to transfer the title to the CO₂ emission reductions to AEPIC. Each digester implemented under this CPA has a unique code (biogas digester code) which is verified from the BSP Nepal's database maintained which include the all details related to biodigester.

The biodigesters of all four CPA's are located at various locations across Nepal. The geographical coordinates of Nepal are: Latitude – North 26.20 degree to North 30.45 degree Longitude – East 80.07 degree to East 88.20 degree.

During the GS validation a site visit was carried out. On the basis of this site visit and the reviewed project documentation^{/CR/PCR/BSPDB/BUB/} (like construction progress report and Plant completion progress^{/CR/} for Biodigester installation) it can be confirmed that w.r.t. the realized technology, the project equipments the project has been implemented and operated as described in the CPA-DD for all four CPA's.

Socio-economic and environmental impacts as specified in Appendix C of the GS Validation & Verification Manual for CDM Projects have been assessed in an appropriate manner within the framework of the EIA.

The general requirements for all gold standard projects must be additional, contribute to sustainable development and result in real, measureable and verifiable permanent emission reduction, which is in line with CDM requirements. Since all the four CPAs have been registered under UNFCCC framework, these general requirements have been fulfilled.

Above all, the project type is eligible for the Gold Standard accordingly.

5.2 Gold Standard Criteria On Additionality Screen

According to the Gold standard, the CPA is requested to use one of the UNFCCC or Gold Standard approved tools. As per the registered CPA-DDs, the evaluation is based on the requirements of additionality. The additionality of the PoA is demonstrated by following the criteria outlined in “Guidelines for demonstrating additionality of small scale project activities” (version 09) EB 68 Annex 27 which is considered up-to-date and reliable at the time of registration as a CDM PoA^{/CPA/unfccc/} and CPA inclusion of all four CPAs available on UNFCCC project webpage.

The validation team confirms that the guidelines and tools applied for the demonstration of additionality are correct, reliable and also updated at the time of registration as CDM CPA, and the DOE has checked registered CDM PoA-DD as well as the CPA-DD for CPA 1, CPA 2, CPA 3 and CPA 4 and deems the criteria listed as sufficient. The way of demonstrating additionality is sufficiently introduced and established to ensure that each CPA under this PoA is additional and justified.

5.3 CPA The Sustainable Assessment Screen “Do no Harm” Assessment

As indicated in the GS Passport, the “Do no harm” assessment was carried out by the project proponent. According to the GS Toolkit Section 2.4.1, the “Do no harm” assessment is based on the safeguarding principles of the UNDP in four aspects: Human Rights, Labor Standards, Environment Protection and Anti- Corruption.

The potential risks alongside the safeguarding principles and the special guidance for proposed biogas digesters projects are listed in the Section F.1 i.e. Outcome Sustainability assessment of the GS Passport. The “Do no harm” assessment is carried out according to the relevant national laws. No resettlement is required for local residents and this is confirmed by the onsite inspection^{/IM01/IM02/IM03/}.

Therefore, the validation team considers that the “Do no harm” assessment has been based on accurate information, with all the reference sources indicated in the CPA GS Passport.

Sustainable Development matrix:

The sustainable development indicators relevant for the project activity have been assessed using the Gold Standard Sustainable Development (SD) assessment matrix. Detailed assessment has been applied to establish the sustainable development matrix in Section F.2 (Sustainable Development matrix) of the GS Passport which is in line with the GS Toolkit 2.4.2 and Annex I. Reference sources have been provided for the descriptions of all the indicators. According to GS Toolkit Section 2.4 and Annex I, the validation of sustainable development (SD) matrix is tabulated below:

No	Indicator	Validation Opinion
1	Air quality ²	The validation team agrees that “Air quality” is suitable monitoring indicator as it can reflect the environmental condition due to reduction of indoor air pollution and respiratory diseases. As the use of non-renewable woody biomass (as the case in baseline) for cooking contributes to greenhouse gas emissions and indoor air pollution leads to severe respiratory related infections. Therefore, use of biogas digester can provide a better and healthier life for an entire rural family. The parameter i.e. “Users’ perception on smoke” will be checked during the verification. Therefore, it can be considered to be used as a SD indicator. Positive impact: score ‘+’ Parameter: Users’ perception on smoke.
2	Water quality and quantity	The project has got no direct impact, but slightly positive impact due to project activity as it leads to reduction of the deforestation activities thereby affecting the protection of water level. Score ‘0’ as impact is planned to be fully mitigated
3	Soil condition	The validation team agrees that “Soil condition” is suitable monitoring indicator as it can reflect the environmental condition. Slurry is used as fertilizer by biogas users. It will be checked during the verification. Therefore, it can be considered to be used as a SD indicator. Positive impact: score ‘+’ Parameter: Use of slurry as fertilizer.
4	Other pollutants	The validation team agrees that “Other pollutants” possibly lead small positive impact on MDG target 7 (ensure environmental sustainability), due to less use of chemical fertilizer but the total impact is very less. Score ‘0’ as impact is planned to be fully mitigated
5	Biodiversity	May have a small positive impact on MDG 7 (environmental sustainability) by reducing pressure on natural habitats due to reduced deforestation. Score ‘0’ as impact is planned to be fully mitigated
6	Quality of employment	The chosen parameter to monitor this indicator is improvement in quality of jobs for the community. In the baseline situation before the project implementation local resident mainly involved in agricultural activities. After implementation of project local people are involved in

² https://hivos.org/sites/default/files/health_and_biogas_2014.pdf

No	Indicator	Validation Opinion
		construction and maintenance of Biodigester under Biogas support programme of Nepal. The validation team considers that the training to the local can enhance their skills and thus can be beneficial to the quality of employment. The validation team agrees that the “training reports/record” can directly reflect the training received by the project staff and thus their skill knowledge and awareness enhancement. Annual monitoring of training records will be carried out for the assessment of quality of employment. Therefore, it can be considered to be used as a SD indicator in quality of employment. Positive impact: score ‘+’ Parameter: Trainings for masons.
7	Livelihood of the poor	Saving of expense on wood, reducing of frequency of illness incidence and improvement in sanitation are identified under the indicator “Livelihood of the Poor”. Monitoring aspect for this parameter includes the number of toilets constructed at each of the end user end. Positive impact: score ‘+’ Parameter: Improved access to sanitation services.
8	Access to affordable and clean energy services	The validation team considers that the project activity uses clean energy source i.e. biogas for thermal i.e. cooking purpose. The validation team agrees that the monitoring of the number of biogas units constructed leads to clean energy service promotion across all the ecological zones of Nepal. Continuous monitoring of the construction of Biodigester unit will be carried out by CME for the assessment of access to affordable and clean energy services at user end. Therefore, it can be considered to be used as a SD indicator in access to affordable and clean energy services. Positive impact: score ‘+’ Parameter: Households using biogas plants
9	Human and institutional capacity	May have a small positive impact on MDG 3 (Promote gender equality and empower women) Score ‘0’ as impact is planned to be fully mitigated
10	Quantitative employment and income generation	The job opportunities have been created (i.e. may have a small, but not measurable positive) after implementation of the Biogas support programme for local people and contractors related to the project.. Score ‘0’ as impact is planned to be fully mitigated

No	Indicator	Validation Opinion
11	Balance of payments and investment	May have a small positive impact on MDG 8 (Develop a global partnership for development) Score '0' as impact is planned to be fully mitigated
12	Technology transfer and technological self-reliance	May have a small positive impact on MDG 8 (Develop a global partnership for development) Score '0' as impact is planned to be fully mitigated

The scoring is reproducible and the justification considers existing information like results from the environmental impact assessment and the local stakeholder consultation in a sufficient manner.. In the second round consultation the scoring of the SD matrix has been discussed in detail with local stakeholders from nearby villages, municipalities and NGOs. The results of this additional consultation confirm the positive impacts of the project in terms of sustainable development.

The total score is +5. There is no sub-total score that is negative and none of the indicators have a negative score. Comprehensive information has been provided by PP to TÜV NORD JI/CDM CP suitable to evidence the data and statements included in the POA and CPA passports.

Crucial indicators have been identified and included in the monitoring plan as provided in the GS passport. The results will be included in the monitoring report for GS verification as specified.

5.4 The Environmental Impact Assessment Screen

Validation team has checked and confirmed that the environmental analysis is done at the PoA level. There are no host country requirements for EIA for this kind of programme – installation of biogas Digesters with cook stoves. However, likely environmental impacts have been discussed in the PoA-DD and same are checked by validation team. Therefore, Environmental Analysis is chosen to be done at PoA level found to be satisfactorily.

Further, this has been verified via interview with representatives from BSP personnels, local biodigester contractors and end user i.e. biogas users during the onsite visit^{/IM02/}.

However an integrated Environment Impact Assessment (IEIA) study was carried out with the to address the potential impacts of the third phase of the Nepal Biogas Support Program as a result of the installation and use of biogas systems for cooking and, to a much lesser extent, for lighting purposes PoA level. The results of the IEIA confirm that no significant environmental impacts or transboundary impacts have been observed. In conclusion, the PoA follows the requirements of the host country with regards to addressing environmental impacts.

After careful consideration of the provided information TÜV NORD JI/CDM CP comes to the conclusion that the project activity meets the GS EIA requirements.

5.5 The Gold standard criteria for stakeholder consultation Screen

Local stakeholders were included already at an early stage of the design phase by means of door-to-door survey conducted by BSP, interviews, telephone interviews, invitation letters and consultation meetings by means of emails and telecom.

People consulted include local residents in the neighbourhood, local government officials, GS supporter NGOs, local NGOs. The invitees were invited via email, invitation letters, posted notices, door-to-door invitations and published newspaper articles. List of consulted stakeholders are submitted to the validation team.

According to the GS requirements, the CPA-DDs as well as a non-technical summary has been made publicly available inviting parties, stakeholders and GS accredited NGOs to comment on the validation requirements. No comments were received.

This CPA stakeholder consultation has taken place in parallel to the validation for retroactive GS registration. The stakeholder consultation meeting took place on 15/08/2014. Representatives of nearby communities as well as local and GS NGOs were actively invited to comment on the existing project design and impacts of the project activity either in written form, during participation at the meeting or in the course of interviews. Positive impacts of the project were pointed out by all interviewees.

A summary of all activities and the comments received are provided in the Section D.2 and D.3 of the PoA-DD for GS registration, in summary, no negative comments were received during the two round of stakeholder consultation, in the additional corresponding evidence have been provided to TÜV NORD JI/CDM CP/EIA/. The GS requirements regarding public consultation are fulfilled.

5.6 Sustainability Monitoring Plan

The monitoring of the programme of activity consists of the monitoring of the emission reductions and the monitoring of the contribution to sustainable development. The monitoring of emission reductions is described in the CPA-DD according to the Approved Small Scale baseline and monitoring methodology AMS I.E, Version 4.0 (for CPA 1) and version 5.0 (for CPA 2, CPA 3 and CPA 4).

At the time of first GS application to Gold Standard registry project proponent has submitted the POA and CPA 1 passport (incl. ver.4.0 of applied methodology). Since, the DOE was contracted on 14/08/2014 for GS validation and project proponent has submitted the project documentation using latest version (i.e. ver.4.0 applicable in Oct 2014) Gold Standard validation within the 6-month. Therefore, it is confirmed by validation team that version 4.0 used in CPA 1 is valid and appropriate. Nevertheless, validation team has checked both versions of the applied methodology and confirms that the difference in these two versions of the applied methodology

does not lead to significant changes in the applicability or the project design. Information w.r.t to same is discussed in the PoA and CPA 1 passport document. Validation team has checked the relevant section of the updated PoA passport and CPA 1 passport in which it is explained and discussed clearly and transparently.

The sustainability monitoring plan is included in the GS Passport as per the requirements in the GS Toolkit Annex I. According to GS Toolkit 2.4.3, all non-neutral indicators must be monitored, and any indicators that were neutralized (i.e. originally scored negative, but now score neutral due to a suitable mitigation measure) must also be included. Moreover, any sensitive issue brought up during the stakeholder consultation must also be included. In the end, six indicators are included in the monitoring plan, they are the six indicators which score "+" in the SD Matrix. CPA passport documents are checked by the validation team which correctly included the monitoring measurement for the corresponding SD parameters.

The indicators and data collection methodology have been described in a sufficient manner. The indicators are deemed appropriate. Difficulties regarding availability are not expected.

6 VALIDATION ASSESSMENT SUMMARY

The following paragraphs include the summary of the final CDM validation assessments for CPA 1, CPA 2, CPA 3 and CPA 4 included and available in project viewpage in UNFCCC webpage. For details of the assessments pl. refer to the discussion of the validation findings in registered CPA validation reports.

6.1 General Description of the CPA Project Activity (ies)

The Nepal Biogas Support Program – PoA has already been registered under CDM /poa/ (UNFCCC ref. no. POA9572) on 2013-01-13. Furthermore CPA 1, CPA 2, CPA 3 and CPA 4 are also already included in the POA under CDM.

- **CPA 1** includes 20,000 digesters which were implemented between 22/06/2007 and 18/03/2009. The CPA started with the commissioning of the first digester listed which is 22/06/2007. The operational lifetime of each digester is 20 years. Annual average emission reduction is 61,510 tCO₂e.
- **CPA 2** includes 19,927 digesters which were implemented between 19/03/2009 and 9/03/2010. The CPA started with the commissioning of the first digester listed which is 19/03/2009. The operational lifetime of each digester is 20 years. Annual average emission reduction is 66,236 tCO₂e.
- **CPA 3** includes 19,959 digesters which were implemented between 10/03/2010 and 19/02/2011. The CPA started with the commissioning of the first digester listed which is 10/03/2010. The operational lifetime of each digester is 20 years. Annual average emission reduction is 66,329 tCO₂e.
- **CPA 4** includes 19,970 digesters which were implemented between 20/02/2011 and 28/02/2012. The CPA started with the commissioning of the first digester listed which is 20/02/2011. The operational lifetime of each digester is 20 years. Annual average emission reduction is 66,397 tCO₂e.

6.2 Environmental Analysis

The environmental analysis is performed at the PoA level; the choice has been justified by the CME in the registered PoA-DD. The validation team confirms that the CME has undertaken an analysis of environmental impacts at PoA level and information is provided therein which is in accordance with procedures as required by the host Party.

6.3 Local Stakeholder Comments

The local stakeholder consultation process is performed at the PoA level, the choice has been justified by the CME in the registered PoA DD.

6.4 Applied Methodology(ies)

Validation team has checked the registered CPA-DD's for CPA 1, CPA 2, CPA 3 and CPA 3 and confirms that all four CPAs meet all applicability criteria of applied methodology i.e AMS I.E, Version 04/version 5.0 "Switch from non-renewable biomass for thermal applications by the user".

Validation team would like to highlight here that the CPA 1 applies the version 4.0 of the approved methodology, AMS I.E "Switch from nonrenewable biomass for thermal applications by the user, valid and applicable at the time of CPA 1 registration. While CPA 2, CPA 3 and CPA 4 are registered under version 5.0 of the approved methodology, AMS I.E which is correct and appropriate.

The validation team confirms that the applicability conditions of the selected approved methodology AMS I.E is appropriately described in registered CPA-DD's of CPA 1, CPA 2, CPA 3 and CPA 4 and the applied methodology is applicable in the context of the all four CPAs.

6.5 Baseline Scenario

As per the registered PoA-DD, the possible alternative scenario is the baseline scenario is continued use of NRB. Rural households use non renewable firewood.

Validation team checked the registered CPA-DDd for CPA 1, CPA 2, CPA 3 and CPA 4 and therefore confirms that the selected baseline scenario represents what would happen in the absence of the project activity and therefore the validation team confirms that:

- (a) All the assumptions and data used by the CME/PP in the registered CPA-DDs for CPA 1, CPA 2, CPA 3 and CPA 4, includes their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the registered CPA-DDs for CPA 1, CPA 2, CPA 3 and CPA 4;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the registered CPA-DDs for CPA 1, CPA 2, CPA 3 and CPA 4;
- (e) The approved baseline methodology has been correctly applied to identify the most plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed project activity.

6.6 Sources and GHGs

The validation team has checked registered PoA-DD and found that project boundary includes the physical delineation of the implemented CPA 1, CPA 2, CPA 3 and CPA 4. The project boundary is the physical, geographical location of each measure (i.e. each biogas digester) installed and area of the use of biomass or the renewable

energy. The sources and gases within the boundary have been considered in a clear manner. The CO₂ emissions from NRB use for cooking have been included in the project boundary.

In all CPA-DD's all emission sources and gases related to the baseline scenario, project scenario are clearly identified and described in project boundary in a complete and transparent manner.

Thus, it is concluded by validation team that the identified boundary, the selected sources, and gases as documented in all four CPA-DD's are justified for the project activity and are fully in line with the requirements set by the applied methodology and registered PoA DD.

6.7 Eligibility Criteria

The validation team has checked registered CPA-DD and finds out start date of the proposed CPA is the earliest date on which real action towards the project activity has occurred, hence, accepts this as the start date of the individual CPAs.

CPA No (CDM Ref. No)	CPA start date	CPA start of operation ³	CPA crediting period
CPA 1 (9572-0001)	22/06/2007	22/06/2007	31 Jan 2013 - 30 Jan 2020 (Renewable)
CPA 2 (9572-0002)	19/03/2009	19/03/2009	08 May 2014 - 07 May 2021 (Renewable)
CPA 3 (9572-0003)	10/03/2010	10/03/2010	08 May 2014 - 07 May 2021 (Renewable)
CPA 4 (9572-0004)	20/02/2011	19/02/2011	08 May 2014 - 07 May 2021 (Renewable)

Validation team confirms that the CPA 1, CPA 2, CPA 3 and CPA 4 is complies with all the eligibility criteria defined in registered PoA-DD and therefore eligible for inclusion under the proposed PoA. Further, it is validated and confirmed by validation team that the GS inclusion criteria were met for CPA-1, CPA-2, CPA-3 and CPA-4 at time of listing which are:

1. The activity of the CPA-1, CPA-2, CPA-3 and CPA-4 are similar, i.e. the construction of biogas plants at household level.
2. The biogas digesters in CPA-1, CPA-2, CPA-3 and CPA-4 are of the same type as described in the Design Document, i.e. GGC 2047 model with a sludge and gas holding capacity range of 2 to 10m³
3. The geographical boundary of each CPA is Nepal and CPA-1, CPA-2, CPA-3 and CPA-4 are close enough to each other in time.

³ Date of first digester implemented in corresponding CPAs.

4. Each CPA is in line with the Do No Harm Assessment requirements as determined in the PoA Passport and does not compromise any of the safeguarding principles.
5. No ODA is granted in return of carbon credits.
6. Users acknowledge the transfer and cease of carbon credits to the CME

6.8 Emission Reductions

Validation team has checked the registered CPA-DD's for CPA 1, CPA 2, CPA 3 and CPA 4 and confirms that the CPA-DD includes the emission reductions calculations in line with the methodology and PoA-DD. Therefore, it is concluded by validation team that the CPA-DDs include the following procedure for emission reduction calculation:

- It has been indicated that the fraction of non renewable biomass used in the absence of the project activity has been determined from "Default values of fraction of non-renewable biomass for Least Developed Countries and Small Island Developing States (version 01.0)" EB 67 Annex 22 as 86%
- The average daily consumption of woody biomass before and after implementation has been sourced from BUS Survey.
- Performance of digester has also been referred from BUS Surveys
- The Emission factor for the substitution of non-renewable woody biomass by similar consumers and Net Calorific Value of the NRB that is substituted have been taken from applied methodology. Also, it has been clarified that the emission factor would be fixed ex-ante.
- Project Participants have opted to use the default factor of 0.95 to account for any potential leakage, as prescribed by the methodology.

The formulae are correctly presented for the determination of emission reductions.

6.9 Monitoring Plan

The monitoring plan presented in the registered CPA-DD's for all four CPA complies with the requirements mentioned in registered PoA. Validation team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found. Based on the information provided in the registered CPA-DD validation team confirms that the proposed monitoring plan is feasible within the CPA design for all CPA's. The relevant points of monitoring plan have been discussed with the PoA managing entity and the CPA implementer (both are same in case of this CPA). Specifically, these points include the monitoring methodology, data management, quality assurance and quality control procedures to be implemented in the context of the activity.

The parameters that are to be monitored ex-post are: P - The share of digesters implemented that is operational - The parameter will be monitored with help of Performance report elaborated at least biennial (as part of BUS or as part of internal quality control reports of AEPC or other monitoring reports).

All registered CPA-DDs provide a description of sampling plan and indicate that the Biogas User Survey (BUS) will be the basis for ex-post emission reduction calculation and preparation of monitoring report. BUS will be carried out for each CPA. The sample size is calculated using the procedure as per EB75 Annex 8, Guidelines on Sampling and surveys for CDM project activities and programmes of activities, thus each CPA will be verified selecting the sample of biogas digester included in the CPA.

Thereofre, it is concluded by the validation team that the monitoring plans available in registered PoA-DD and respective CPA-DDs for CPA 1, CPA 2, CPA 3 and CPA 4 are correct. And it can be stated that the monitoring plans as mentioned in the CPA-DD for CPA 1, CPA 2, CPA 3 and CPA 4 can be implemented and all the monitoring arrangements are feasible within the individual CPA design which are in line with the PoA-DD and applied methodology.

6.10 Approval and Authorization

The Letter of Approval issued by the host party (DNA, of Nepal) vide reference number No: 838 dated 31/12/2009 is verified which exactly mentioned with the same PoA Title as verified from the UNFCCC website.

The letters also indicates that the participating Party is a Party to the Kyoto Protocol, and that the participation in the PoA is voluntary. The Nepal LoA also confirms that the proposed PoA contributes to the sustainable development of India (host country). Based on the information given in the letter, the validation team considers the approval as unconditional with respect to these items.

6.11 Project Documentation / Editorial Aspects

Registered CPA-DD for CPA 1, CPA 2, CPA 3 and CPA 4 are checked by validation team to ensure that the valid and applicable version of the F-CDM-SSC-CPA-DD template are used.

6.12 Hints for next CPA Inclusion

No FAR was raised.

7 VALIDATION OPINION

atmosfair gGmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the following retroactive Gold Standard (GS) CPA inclusions to the Nepal Biogas Support Program-POA:

“Nepal Biogas Support Program- CPA 1: 20,000 digesters.” (GS3109)

“Nepal Biogas Support Program - CPA 2: 19,927 digesters” (GS3113)

“Nepal Biogas Support Program - CPA 3: 19,959 digesters” (GS3114)

“Nepal Biogas Support Program - CPA 4: 19,970 digesters” (GS3116)

The Nepal Biogas Support Program-POA has already been registered under CDM on 2013-01-31 and the CPAs have already been included under CDM as well:

Nepal Biogas Support Program- CPA 1: 20,000 digesters on 2013-01-31

Nepal Biogas Support Program - CPA 2: 19,927 digesters on 2014-05-08

Nepal Biogas Support Program - CPA 3: 19,959 digesters on 2014-05-08

Nepal Biogas Support Program - CPA 4: 19,970 digesters on 2014-05-08

In the course of the retroactive Gold Standard validation 6 Corrective Action Requests (CARs) and 18 GS pre-feasibility assessment comments were raised and successfully closed. No Forward Action Request (FAR) was raised.

In detail the conclusions can be summarised as follows:

- Each CPA is in line with all relevant host country criteria (Nepal) and all relevant Gold standard requirements.
- All eligibility criteria established for each CPA inclusion in the PoA-DD and POA passport have been sufficiently fulfilled.
- Each carbon monitoring plan and sustainability monitoring plan is transparent and adequate
- The baseline has been appropriately identified for each CPA as per the applied methodology.
- The framework for determination project additionality is sufficiently justified in each CPA-DD in line with the POA-DD and the POA passport.
- Information on the local stakeholders' consultation by the project participants prior to submitting the CPAs for validation are sufficiently provided in each CPA-DD and each CPA passport which is in line with POA-DD and the POA passport.
- The calculation of each CPA is carried out in a transparent and conservative manner, so that the calculated emission reductions of 61,510 tCO₂e (for CPA 1), 66,236 tCO₂e (for CPA 2), 66,329 tCO₂e (for CPA 3) and 66,397 tCO₂e (for CPA 4) are most likely to be achieved within the first renewable crediting period.
- Information on the environmental impact analysis of each CPA is sufficiently provided in the CPA-DDs and the CPA passports, which is in line with POA-DD and POA passport.

- The CPA "Nepal Biogas Support Program- CPA 1: 20,000 digesters", "Nepal Biogas Support Program - CPA 2: 19,927 digesters", "Nepal Biogas Support Program - CPA 3: 19,959 digesters" and "Nepal Biogas Support Program - CPA 4: 19,970 digesters" shall be included in the PoA "Nepal Biogas Support Program-POA"

Vadodara, 2015-11-16

Essen, 2015-11-16

A handwritten signature in black ink, appearing to read "P. Patel" with a stylized flourish at the end.A handwritten signature in black ink, appearing to read "Stefan Winter" with a stylized flourish at the end.

Pankaj Patel
Validation Team Leader
TÜV NORD JI/CDM Certification Program
Validation Team Leader

Stefan Winter
TÜV NORD JI/CDM CP
Final Approval

8 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/AEPC/	Contract for the operation of the AEPC/NRREP NSP/RSC signed between AEPC and BSP Nepal for conducting the service of National Service provider for AEPC includes annex detailed work plan including financial proposal.
/BUS/	Biogas User's Survey for the year 2012-13 (for CPA 1) and 2013-14 applicable for CPA 1 to CPA 4.
/BUB/	• Biogas plant owners/user's booklet issued by AEPC. • Plant Handover form signed by Biodigester owner. • Annexure-1 (ER Right Transfer Agreement) of Plant Handover form signed by Biodigester owner.
/Biogas/	• Scientific paper on Comparative Study of Biogas Slurry with farmyard manure as fertilizer • BSP year book dated August 2012 on construction of biogas plants in Nepal under Biogas Support Programme (BSP)
/CONT/	Contract and/or Memorandum of Understanding (MoU) signed between The Gold Standard Foundation and atmosfair gGmbH on 09/10/2014.
/E-Form/	• Evaluation forms for Local Stakeholder Consultation (LSC) for BSP Nepal PoA original copies • Evaluation forms for Local Stakeholder Consultation (LSC) for BSP Nepal PoA original copies translated copies • Evidence on invitations to Local Stakeholder Consultation (LSC) and Design Consultation (DC) - Nepal BSP PoA • Non-technical Summary of Nepal Biogas Support Program (PoA) in English
/GSP/	Draft GS Passport and PoA design consultation report • Draft GS Passport "Nepal Biogas Support Program-PoA" version 02 • Final GS Passport "Nepal Biogas Support Program-PoA" version 04 • PoA design consultation report "Nepal Biogas Support Program-PoA" dated 19/09/2014.
	• GS Passport for all four CPA version 01 dated 2014-10-01. • GS Passport for all four CPA version 02 dated 2015-05-21. • GS Passport for all four CPA version 03 dated 2015-10-22
/HCA/	Host Country Approval from Nepal DNA
/ISO/	ISO certificate for ISO 9001:2008 issued dated 08/12/2012. Valid till

Reference	Document
	07/12/2015.
/IMS/	ISO based internal Monitoring i.e. Field Trip Report Quality Control and Monitoring Department by BSP Nepal on sample basis for the Biodigester installed.
/LSC/	- Draft LSC report “Nepal Biogas Support Program-PoA” version 01 - Final LSC report “Nepal Biogas Support Program-PoA” version 03
/ODA/	Annex-D for ODA Declaration dated 20/10/2014 signed by APEC.
/ORG/	Organisation Chart
/Photo/	• Photographic evidences during the site visit. • Photographs of Stakeholder Feedback Round Meeting Notice, meeting and Meeting Minutes • Picture of SD matrix filling
/POA-DD/	Registered Project Design Document named “Nepal Biogas Support Program-PoA”
/QC/	Quality Standard manual prepared by BSP Nepal for the construction of Biodigester in Nepal dated 2010 (Given to the companies and or end user)
/SFR/	Stakeholder Feedback Round Evidences: - Questionnaires regarding impacts of “Nepal Biogas Support Program-PoA” - Invitation emails to stakeholders including local NGO, Local DRC, Local EPA, GS Expert, NGOs for Stakeholder Feedback Round - Invitation letters for stakeholders meeting - SFR invitations evidence 11/03/2015 - Email for Gold Standard Stakeholder Feedback Round for Nepal Biogas Support Programme PoA - Email for invitation to comment on the Nepal biogas support program - PoA
/SUR/	Survey Questionnaire used by survey agency for the BUS Survey for CPA 1 CPA 2 CPA 3 CPA 4.
/TRG/	Training provided by AEPC person and consultant team (responsible for BUS Survey) to the enumerators (Annex-4 of the BUS Survey Report).
/TS/	Quality Standard manual prepared by BSP Nepal for the construction of Biodigester in Nepal dated 2010 (Given to the companies and or end user)
/XLS/	Emission reduction calculation spreadsheet w.r.t CPA 1-4

Table 7-2: Background investigation and assessment documents

Reference	Document															
/AMS/	AMS-I.E. version 4 and version 5.															
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)															
/GSM/	The Gold Standard Validation & Verification Manual for CDM Projects, The Gold Standard ver. 2.2.															
/GSR/	Gold Standard Requirements (Version 2.2)															
/GST/	Gold Standard Toolkit (Version 2.2)															
/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book															
/KPI/	Kyoto Protocol (1997)															
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)															
/PoA/	Registered POA-DD and included CPA-DDs for CDM project: “Nepal Biogas Support Program-PoA” , UNFCCC PoA project reference no 9572 <table><tr><th>Ref</th><th>CPA Title</th><th>Inclusion date</th></tr><tr><td>9572-0004</td><td>Nepal Biogas Support Program - CPA 4: 19,970 digesters.</td><td>08 May 14</td></tr><tr><td>9572-0003</td><td>Nepal Biogas Support Program - CPA 3: 19,959 digesters.</td><td>08 May 14</td></tr><tr><td>9572-0002</td><td>Nepal Biogas Support Program - CPA 2: 19,927 digesters</td><td>08 May 14</td></tr><tr><td>9572-0001</td><td>Nepal Biogas Support Program- CPA 1: 20,000 digesters.</td><td>31 Jan 13</td></tr></table>	Ref	CPA Title	Inclusion date	9572-0004	Nepal Biogas Support Program - CPA 4: 19,970 digesters.	08 May 14	9572-0003	Nepal Biogas Support Program - CPA 3: 19,959 digesters.	08 May 14	9572-0002	Nepal Biogas Support Program - CPA 2: 19,927 digesters	08 May 14	9572-0001	Nepal Biogas Support Program- CPA 1: 20,000 digesters.	31 Jan 13
Ref	CPA Title	Inclusion date														
9572-0004	Nepal Biogas Support Program - CPA 4: 19,970 digesters.	08 May 14														
9572-0003	Nepal Biogas Support Program - CPA 3: 19,959 digesters.	08 May 14														
9572-0002	Nepal Biogas Support Program - CPA 2: 19,927 digesters	08 May 14														
9572-0001	Nepal Biogas Support Program- CPA 1: 20,000 digesters.	31 Jan 13														
/PS/	CDM Project Standard (Version 7.0)															
/PCPI/	Clean development mechanism project cycle procedure (Version 07.0)															
/VAL/	- Validation report for CDM PoA: “Nepal Biogas Support Program-PoA”, UNFCCC PoA project reference no 9572 dated 31/01/2014. - Validation reports for all CPAs available in UNFCCC webpage. Details of the CPA's is given below: <table><tr><th>Ref</th><th>CPA Title</th><th>Inclusion date</th></tr><tr><td>9572-0004</td><td>Nepal Biogas Support Program - CPA 4: 19,970 digesters.</td><td>08 May 14</td></tr><tr><td>9572-0003</td><td>Nepal Biogas Support Program - CPA 3: 19,959 digesters.</td><td>08 May 14</td></tr></table>	Ref	CPA Title	Inclusion date	9572-0004	Nepal Biogas Support Program - CPA 4: 19,970 digesters.	08 May 14	9572-0003	Nepal Biogas Support Program - CPA 3: 19,959 digesters.	08 May 14						
Ref	CPA Title	Inclusion date														
9572-0004	Nepal Biogas Support Program - CPA 4: 19,970 digesters.	08 May 14														
9572-0003	Nepal Biogas Support Program - CPA 3: 19,959 digesters.	08 May 14														

Reference	Document		
	9572-0002	Nepal Biogas Support Program - CPA 2: 19,927 digesters	08 May 14
	9572-0001	Nepal Biogas Support Program- CPA 1: 20,000 digesters.	31 Jan 13
/VVS/	CDM Validation and Verification Standard (Version 07.0)		

Table 7-3: Websites used

Reference	Link	Organisation
/dna-n/	Review of 10-year plan of Government of Nepal http://www.npc.gov.np/uploads/plans/20081228112759.pdf	Government of Nepal
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/moel/	http://www.moen.gov.np/	Ministry of Energy, Government of Nepal
/poal/	http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/view	CDM POA project site
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Moi ¹		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Raju Laudari	AEPC/ Assistant Director
/IM01/	V	☒ Mr. ☐ Ms	Prem Kumar Pokharel	AEPC/ Program Officer- Climate Change
/IM01/	V	☒ Mr. ☐ Ms	Neelam Sharma Rijal	AEPC/ Program Officer- Carbon Financing
/IM01/	V	☒ Mr. ☐ Ms	Ranjan Gajurel	Biogas Plant User in Nepal
/IM02/	V	☐ Mr. ☒ Ms.	Shiladevi Polidal	Biogas Plant User in Nepal

Reference	Mol ¹		Name	Organisation / Function
//IM02/	✓	☐ Mr. ☒ Ms.	Lal Bahadur Muktan	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Jay Bahadur Sintang	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Laxman Bastola	Manager/Biogas Plant Distributer
//IM02/	✓	☐ Mr. ☒ Ms.	Gopal Basnet	Manager/Biogas Plant Distributer
//IM02/	✓	☐ Mr. ☒ Ms.	Sarashwati Osti	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Turna Maya Soti Magar	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Netra P. Shrestha	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Taradevi Sapkota	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Rudramaya Pokhrel	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Ghan Shyam Paigahi	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Yam P. Acharaya	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Pramananda Acharaya	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Tulsi Paudel	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Prakash Timsina	Supervisor/Biogas Plant Distributer
//IM02/	✓	☐ Mr. ☒ Ms.	Sanoj Dhakal	Supervisor/Biogas Plant Distributer
//IM02/	✓	☐ Mr. ☒ Ms.	Santa Maya Ghale	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Anita Ghale	Biogas Plant User in Nepal
//IM02/	✓	☐ Mr. ☒ Ms.	Asha Ghale	Biogas Plant User in Nepal

Reference	Moi ¹		Name	Organisation / Function
/IM02/	V	☐ Mr. ☒ Ms.	Kamala Tamang	Biogas Plant User in Nepal
/IM02/	V	☐ Mr. ☒ Ms.	Santu Shrestha	Biogas Plant User in Nepal
/IM02/	V	☐ Mr. ☒ Ms.	Teknath Pandey	Supervisor/Biogas Plant Distributer
/IM02/	V	☐ Mr. ☒ Ms.	Baburam Gautam	Manager /Biogas Plant Distributer

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

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Applicability conditions
- A3:** Eligibility Criteria Compliance
- A4:** Responses to GS Pre-Feasibility Assessment
- A5:** Appointment certificates of the team members

ANNEX 1: VALIDATION PROTOCOL

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
1. Project Eligibility				
1.1. Has the correct project size been selected?	/GSP/ /LSC/	Yes, this is a small-scale project under CDM rules as each of the independent subsystems (bio digesters) included in the CPA is not greater than 1% of the threshold defined for a small scale project.	OK	OK
1.2. Does a written statement (e.g. in the CPA-DD) clearly describe that the project is not a de-bundled part of a large or small scale project?	/GSP/ /UNFCCC/	Yes, it is confirmed that the project is not a de-bundled part of a large or small scale project.	OK	OK
1.3. If there is an applicable cap-and trade scheme in the project's host country, has an arrangement been made to cancel allowances in the applicable scheme?	/GSR/ /GST/	Not applicable since the proposed project has not involved in any applicable cap-and trade scheme in Nepal.	OK	OK
1.4. Does the project clearly demonstrate its eligibility under Gold Standard	/GSP/ /GST/	Yes, The CPA had been clearly state each eligibility under Gold Standard for this project.	OK	OK
1.5. Does the Project reduce an applicable GHG	/GSP/ /GST/	Yes, programme will reduce greenhouse gas emission transparent and suitable	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
1.6. Does the project clearly demonstrate that no ODA has been used under condition that the credits coming out of the projects are transferred to the donor country.	/GSP/ /ODA/ /GST/	Yes, the No ODA statement had been reviewed by the DOE. However, a Scanned copy of the Official Development Assistance Declaration statement signed by the project owner is not given in Annex 1. Submit the same to Validation team. GS Rules & Toolkit-Annex D	CAR 1-1	OK
1.7. Does the project apply the correct project cycle(regular vs. prefeasibility assessment)	/GSP/ /GSR/	Yes. The CPA applies for Gold Standard under the retroactive project cycle since the construction of the biodigesters involved in the project has been finished	OK	OK
1.8. Is the project being registered under any other certification scheme for the same of overlapping crediting periods?	/GSP/ /GSM/	This CPA had been registered as CDM CPA as confirmed via project view page in UNFCCC website: http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/viewCPAs The project has not claimed any other certification scheme and no overlapping of crediting period was identified.	OK	OK
2. Deviations in GHG Emission Reduction Estimation (Gold Standard Conservativeness Principle)				
2.1 Has the baseline scenario been constructed in a conservative manner (i.e. assumptions are made explicitly and choices are substantiated)?	/GSP/ /UNFC CC/ /GSM/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC. The baseline scenario is continued use of non renewable biomass (NRB) i.e. firewood for cooking.	OK	OK
2.2 Does the PoA-DD use the latest version of the methodology and the latest	/GSP/ /UNFC	Yes, as per the registered CPA-DD available under project	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
interpretation from the EB at the time of first submission to the GS?	CC/	viewpage in UNFCCC.		
2.3 Does the CPA-DD describe the baseline methodology?	/GSP/ /UNFC CC/ /AMS/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK
2.4 Does the CPA-DD describe the quantified baseline scenario?	/GSP/ /UNFC CC/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK
2.5 Does the CPA-DD include and overview of the current and known future legally binding regulatory instruments and assess whether the project would be implemented anyway because of these?	/GSP/ /UNFC CC/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK
2.6 Does the CPA-DD provide evidence based on which “common practice” of the technology used can be assessed?	/GSP/ /UNFC CC/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK
2.7 Does the CPA-DD address leakage issues as part of the baseline and project boundary?	/GSP/ /UNFC CC/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK
2.8 Does the project apply the methodology that results in the lowest baseline emission?	/GSP/ /UNFC CC/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC.	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
2.9 Are all likely baseline scenarios developed and quantified in the CPA-DD?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.10 Are there any material uncertainties over the numerical data sets applied (e.g. generator efficiencies, and fuel types and resulting emission factors, etc.)?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.11 Is there a systematic referencing to publicly available information or to expert or expert opinions?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.12 Is information verifiably presented with a sufficient degree of detail and transparency?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.13 Is it fully transparent from the CPA-DD which sets of data were selected based on the prerogative of conservativeness?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.14 Does the CPA-DD include full references to sources of data used?	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK
2.15 Are data uncertainties clearly stated, if possible, with associated	/GSP/ /UNFCCC/	Yes, as per the registered CPA-DD available under project webpage in UNFCCC.	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
margins of error?				
3 Gold Standard Criteria on Additionality				
3.1 Has the PP selected and applied the correct tool for demonstrating additionality?	/GSP/ /GSR/ /GST/	Yes, This CPA had been registered as CDM CPA as confirmed via project viewpage available in the UNFCCC website: http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/viewCPAs The additionality of the SSC CPA is demonstrated in line with "Standard on the Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 03"	OK	OK
3.2 Is the line of argumentation used by the PP to demonstrate additionality correct?	/UNFCCC/ /GST/ /GSR/ /GSP/	Yes, as per the registered CPA-DD available under project viewpage in UNFCCC. Additionality criteria is being met as defined in the registered PoA-DD and CPA-DD.	OK	OK
3.3 Are the references used to demonstrate additionality up-to date and reliable?	/UNFCCC/ /GST/ /GSR/ /GSP/	Yes validation team has checked the registered CPA-DD and confirmed that the references used to demonstrate additionality up-to date and reliable.	OK	OK
3.4 Has the PP compared the proposed project activity with normal practice in the region (especially if similar projects have already	/UNFCCC/ /GST/ /GSR/ /GSP/	No need for small-scale project.	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
been implemented on a commercial basis in the region)?				
3.5 Are assumptions (qualitative or quantitative) used to demonstrate additionality conservative?	/UNFCCC/ /GST/ /GSR/ /GSP/	Yes, validation team has checked the registered POA-DD, CPA-DD and confirmed that the assumptions (qualitative or quantitative) used to demonstrate additionality is conservative.	OK	OK
4 Sustainability Assessment				
4.1 Is "Do no harm" assessment based on accurate information?	/GST/ /GSR/ /GSP/	Validation team has checked the POA passport and confirmed that the complete information is given with respect to DNHA criteria per type of activity, defined at programme level.	OK	OK
4.2 Has a sustainable development matrix been developed? If yes, is it prepared according to the guidance under GS Toolkit Section 2.4.2, Table 3.2 and Annex I?	/GST/ /GSR/ /GSP/	Yes, in Section F.2. i.e. Sustainable Development matrix of the CPA passport sustainable development matrix been developed and prepared as per GS toolkit 2.4.2 and Annex I.	OK	OK
4.3 Is the matrix based on existing sources of information (data from existing reports, results from stakeholder consultation, experiences with similar projects in similar situations, expert judgement if data are unavailable or are of poor quality, etc)?	/GST/ /GSR/ /GSP/	Corrective action is requested in this respect i.e. Have the Project participants discussed all of the safeguarding principles with the stakeholders. Submit the evidence to conform to the requirement GS Toolkit-2.4.1. As per comments from GS PFA review regarding safeguarding principles need to be addressed; as for some of the SP's (like for serial no.2, 3, 6, 7, 8, 9 and 10) reference or source cited is/are missing. (GS Toolkit-3.5.1)	~~CAR 4-1~~ ~~CAR 4-2~~	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
		MDGs and its target have not been described in the GS Passport		
4.4 Are data and expert opinions presented in a sufficient degree of detail and transparency? Are they verifiable?	/GST/ /GSR/ /GSP/	Yes, they are transparency and verifiable in the PoA passport and related CPA passports.	OK	OK
4.5 Are data uncertainties clearly stated with associated margins of error?	/GST/ /GSR/ /GSP/	Yes, Justification choices, data source and provision of references are clearly stated.	OK	OK
4.6 Is 'scoring' reproducible and verifiable?	/GST/ /GSR/ /GSP/	Yes, scoring is reproducible and verifiable.	OK	OK
4.7 Are at least two of the sub-totals (categories) positive? Is the third sub-total at least neutral?	/GST/ /GSR/ /GSP/	Yes, at least two of the sub-totals (categories) positive and the third subtotal are at least neutral.	OK	OK
4.8 Is there a clear explanation on 'how the matrix was completed together with the stakeholders'?	/GST/ /GSR/ /GSP/	Yes, explanation and reference source is included for each indicator, regardless of score while completing in the matrix.	OK	OK
5 Environmental Impact Assessment				
5.1 Does the project activity conform to host country (local, regional or national) requirements concerning environmental impact assessment?	/GSP/ /LSC/ /GSM/ /HCA/ /EIA/	Yes, The host country DNA issued approval for the PoA on 31/12/2009. Further, based on the on-site interviews with the AEPC & BSP officials validation team confirmed that there is no mandated legal requirement for installation of biogas	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
		system in households of Nepal.		
6. Environmental Impact Assessment				
6.1 Stakeholder Consultation				
6.1.1 Have PPs fulfilled the GS requirements, set out in GS Toolkit Section 2.6 and 2.11, regarding stakeholder consultation?	/GST/ /GSR/ /GSP/ /POA-DD/ /unfccc/	Yes, project proponent/CME fulfils the GS requirement as set forth on GS toolkit regarding the stakeholder consultation. However, CAR E1 is raised in this regard i.e. 1. Summary of alterations based on stakeholders comments is missing in section C.3 of LSC report (GS Rules & Toolkit Annex R, E.1) 2. Under section B for design of Stakeholder Consultation Process iii. Invitation tracking table is given in LSC report. Submit the evidence against the milestone given in the table (GS Toolkit-3.5.1) 3. Non-technical summary/E-Form/ is given in English language in the LSC report. However, same in local language is not given. Clarification is request for the same. (GS Toolkit-3.5.1) 4. Submit the stakeholder evaluation forms available with the PP. (GS Toolkit-3.5.1)	~~CAR 6-1~~	OK
6.1.2 Has an Invitation tracking table been filled out?	/LSC/ /E-Form/ /GSP/ /PHOTO/	Yes, based on document submitted by PP it is confirmed by validation team that the invitation tracking table has been filled out. Validation team has checked the copies of invitations; a non-technical summary in the local language in the Local	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
	/SFR/	Stakeholder Consultation report, as well as a summary in English. In the LSC report a participants list is available along with Stakeholder evaluation forms are available		
6.1.3 Are copies of invitations published/sent out available?	/LSC/ /SFR/	Yes, copies of invitations published/sent out are available. LSC report and evaluation form and Stakeholder Feedback Round Evidences submitted by PP are checked in this respect.	OK	OK
6.1.4 Is a non-technical summary included in the Local Stakeholder Consultation report?	/LSC/ /SFR/	Yes, non-technical summary in the local language has been included in the Local Stakeholder Consultation report, as well as a summary in English. LSC evidence is checked by validation team.	OK	OK
6.1.5 Is a participant list available?	/LSC/ /SFR/ /DC/	Yes, participants list is present in the LSC and DC report.	OK	OK
6.1.6 Are stakeholder evaluation forms available?	/LSC/ /SFR/ /E-Form/	Yes, signed and filled Stakeholder evaluation forms are available.	OK	OK
6.1.7 Are minutes of the meeting(s) available?	/LSC/ /SFR/	Yes, the minutes of physical meetings and consultations are included in Section C.3 of the LSC report.	OK	OK
6.1.8 Has due account been made on comments received?	/LSC/ /SFR/	Yes, the comments from the local stakeholders and all the participants confirm that due account has been taken for the project activity i.e. the national biogas programme of BSP Nepal .Validation team has interviewed the participants in the	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
		local stakeholder interview in during the on-site visit. In addition, the overall comments are supportive to the biogas programme, and showed the interest to install biogas digesters.		
6.1.9 If stakeholders required a revisit of the sustainable development assessment, has this been done?	/LSC/ /SFR/	Yes, this has been done.	OK	OK
6.1.10 Is the consolidated sustainable development matrix presented based on own 'preliminary' scoring and the matrix from the outcome of the blind stakeholder exercise?	/LSC/ /SFR/	Yes, consolidated sustainable development matrix presented based on own 'preliminary' scoring and the matrix from the outcome of the blind stakeholder exercise. The LSC report and passport has been checked. Thus, it is concluded by validation team that the sustainable development matrix presented based on own 'preliminary' scoring and the matrix from the outcome of the blind stakeholder exercise	OK	OK
6.2 Stakeholder Feedback Round				
6.2.1 Is there evidence clearly showing that the latest version of the complete PoA-DD (including the EIA, if applicable) was made publicly available for a period of two months prior to completion of the validation in a readily accessible form?	/UNFCCC/ /SFR/ /GSR/ /GST/ /PoA/	The PoA had been registered by the UNFCCC and same is checked by validation team from the project view page of UNFCCC website. http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/viewCPAs And the GS 3110 had been listed on the GS website.	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
6.2.2 Is there evidence clearly showing that the non- technical summary of the project (in appropriate local language(s)) was made publicly available for a period of two months prior to completion of the validation in a readily accessible form?	/UNFCCC/ C/ /SFR/ /GSR/ /GST/ /PoA/	The PoA had been registered by the UNFCCC and same is checked by validation team from the project view page of UNFCCC website. http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/viewCPAs And the GS 3110 had been listed on the GS website.	OK	OK
6.2.3 Is here evidence clearly showing that all relevant supporting information (if available, in appropriate local language(s)) was made publicly available for a period of two months prior to completion of the validation in a readily accessible form?	/UNFCCC/ C/ /SFR/ /GSR/ /GST/ /PoA/	The PoA had been registered by the UNFCCC and same is checked by validation team from the project view page of UNFCCC website. http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/7BSCYZMH2U05TWXFJKELND18PRQ96O/viewCPAs And the GS 3110 had been listed on the GS website and readily accessible.	OK	OK
6.2.4 Does the Passport include a description of the procedure followed to invite comments, including addressing all the details of the oral hearing such as place, date, participants, language, local or national GS NGO supporters, etc.?	/UNFCCC/ C/ /SFR/ /GSR/ /GST/ /PoA/	Yes, PoA passport and LSC report include the information i.e. place, date, participants, language, local or national GS NGO supporters Also, the physical design consultation meeting was planned along with the Local Stakeholders' Consultation meeting; email communication was verified by validation team to confirm the same.	OK	OK
6.2.5 Does the Passport include all	/LSC/	Yes, the comments received during the LSC and design	OK	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
written or oral comments received?	/SFR/ /GSR/ /GST/	consultation meeting are given in LSC report and DC report.		
Does the Passport include the argumentation on whether or not comments are taken into account and the respective changes to the project design?	/UNFCCC/ /SFR/ /GSR/ /GST/	No negative comments have been received during the stakeholder consultation meeting.	OK	OK
7. Pre-Feasibility Assessment				
7.1 Has the feedback from GS been followed-up?	/PFA/ /LSC/ /DC/ /GSP/	The feedback from GS had been identified and assessed by DOE. PP reply and corrective action thereafter in the PoA passport, CPA passport, LSC report and DC report are correctly carried out. The said revised docs are checked by validation team and found OK.	OK	OK
8. Sustainability Monitoring Plan				
8.1 Are chosen parameters relevant to the indicators?	/PFA/ /LSC/ /DC/ /GSP/	However, Corrective action is raised by validation team in this regards i.e. 1. Mitigation actions are left blank for some of the SD indicators (e.g. for “Soil Condition”) monitoring plan (GS Toolkit-2.4.3). Confirm if all the mitigation measures put in place to prevent the risk of violating a Safeguarding Principle of the ‘Do No Harm’ Assessment. 2. For SD parameters, the “Estimation of baseline situation of	~~CAR 8-1~~	OK

Checklist Item Based on the GS Toolkit, GS Requirements and their relevant Annexes	Reference	Findings, comments, references, data sources	Draft Concl.	Final Concl.
		parameter"; "current situation of parameter" and "future target for the parameter" is not explained clearly. Also basis of stating the information is not evidenced. (GS Toolkit-2.4.3) 3. As explained in Sustainability monitoring plan it is not clear about who will monitor like Survey will be basis or else (GS Toolkit-3.5.1)		
8.2 Is the sustainability monitoring plan unambiguous about how the parameter will be monitored?	/PFA/ /LSC/ /DC/ /GSP/	Yes, and details in the CPA passport have been reviewed by the DOE to confirm that the sustainability monitoring plan and its monitoring frequency is clearly defined and explained. The monitoring plan states all information about the monitoring parameter.		
8.3 Is there any concern regarding the feasibility of the monitoring plan?	/PFA/ /LSC/ /DC/ /GSP/	No, the monitoring plan can be operated feasibility by the project proponent. Same is discussed clearly in the CPA passport and also verified during site visit and interview with the project proponent. The monitoring plan can be accomplished as described in the CPA passport		

ANNEX 2: ASSESSMENT OF APPLICABILITY CONDITIONS

Table A-2: Assessment Applicability Criteria

☐	Applicability Criteria of applied methodology(ies) have been completely incorporated in the eligibility criteria
☐	Compliance with applicability criteria has been justified and fulfilled by the CPA as follows
☒	Compliance with applicability criteria have already been justified and fulfilled during inclusion of CPA 1, CPA 2, CPA 3 and CPA 4 under CDM (as below:)

CME Demonstration			DOE Assessment	
Nr.	Methodology Applicability Criterion	Justification	Appropriate	Means and result of assessment
1	Small-Scale project requirement: For biomass, biofuel and biogas project activities, the maximal limit of 15MW (e) is equivalent to 45 MW thermal output of the equipment or the plant (e.g. boilers). For thermal applications of biomass, biofuels or biogas (e.g. the cookstoves), the limit of 45 MWth is the installed/rated capacity of the thermal application equipment or device/s (e.g. biogas stoves).	As per registered CPA-DD for CPA-1 CPA-2, CPA-3 and CPA-4 the biogas capacity of each stove is 400litre/hour. With a methane content of 52%, this gives an annual natural gas capacity of not more than 1.86 kWth per stove (Refer registered emission reduction spreadsheet for CPA-1 CPA-2, CPA-3 and CPA-4). This means that around 24,000 stoves would still have an aggregated capacity below the 45MWth small scale threshold value; however the the capacity of all CPA-1 CPA-2, CPA-3 and CPA-4 is limited upto 20,000 installations only.	☒	validation team has checked the supporting evidence for capacity of stove and methane content in Biogas and reproduced the calculation for thermal capacity. It has been confirmed that capacity of one stove is not more than 1.86KWth and total thermal capacity of biogas stove installed is less than 45MWth for registered CPA-1 CPA-2, CPA-3 and CPA-4 .
2	This category comprises activities to displace the use of non-renewable biomass by introducing renewable energy technologies. Examples of these technologies include but are not limited to biogas stoves, solar cookers, passive solar homes, renewable energy based	The digesters are indeed “small thermal appliances that displace the use of non-renewable biomass by introducing new renewable energy end-user technologies”. AMS-I.E. even lists biogas stoves as an example of eligible end user technologies.	☒	The digesters are small thermal appliances that displace the use of non renewable biomass by introducing new renewable energy end-user technologies. Same was validated by validation team during site visit.

CME Demonstration			DOE Assessment	
Nr.	Methodology Applicability Criterion	Justification	Appropriate	Means and result of assessment
	drinking water treatment technologies (e.g. sand filters followed by solar water disinfection; water boiling using renewable biomass).			
3	Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	As per registered CDM POA-DD, the annual BUS conducted in 2012 demonstrated that the time needed to gather firewood, the price of firewood and the distance travelled to gather firewood is increasing at least since December 1989. This conclusion was confirmed in the NRB survey, conducted as a part of BUS, conducted during July/August 2012. In that survey the respondents were asked to provide averages for the time needed to gather firewood, the distance travelled and the price. The average of the estimates from all respondents, showed a clear increase on all three indicators, pointing towards the use of NRB. In addition, these trends seen are not on the account of the enforcement of national legislation. A relevant policy initiative is the development of community forests. However, the Nepal National Action Programme shows that community forestry has the opposite effect and significantly reduces the time spend on firewood gathering. Therefore the increase demonstrated by the BUS cannot be a result of this policy.	☒	The use of NRB since 31st December 1989 has been established with Biogas User Survey Report. As per registered PoA-DD the Non Renewable Biomass (NRB) survey conducted in 2012 confirms that the biomass used by households has been subject to the trends listed in AMS-I.E. paragraph 7 since 31 December 1989. Same was also found in interview of user households during site audit by validation team. Most of the interviewed users were referring use of NRB in the past. The finding that NRB was used is also backed by independent report such as "The Environmental Impact of Poverty: Evidence from Firewood Collection in Rural Nepal"

ANNEX 3: ELIGIBILITY CRITERIA COMPLIANCE

Table A-3: Assessment on CPA Compliance with Eligibility Criteria specified in the registered PoA-DD (VVS, §231 and EB74, Annex 5, §18)

☐	Eligibility Criteria has not been sufficiently justified and fulfilled by the CPA
☐	Eligibility Criteria has been sufficiently justified and fulfilled by the CPA's as follows
☒	Eligibility Criteria have already been sufficiently justified and fulfilled during inclusion of CPA 1, CPA 2, CPA 3 and CPA 4 under CDM (as below:)

CME Demonstration			DOE Assessment	
Nr.	Eligibility Criteria	Justification	Appropriate and sufficient	Explanation of final result
1	Geographical boundary	All biogas digesters in the registered CPA-1 CPA-2, CPA-3 and CPA-4 are located within the geographical boundaries of Nepal. This is confirmed by the CME by ensuring that each individual installation is a) located at an address that lies within the geographical boundaries of Nepal as demonstrated by providing the address of all biogas digesters in the CPA database; and b) has GPS coordinates that are situated within the geographical boundaries of Nepal.	☒	CPAs has been implemented within geographical boundary of Nepal, that is confirmed by unique digester number and GPS coordinates in BSP Nepal's database maintained which include the all details related to biodigester. This has also been validated from the commissioning report of digester submitted to DOE for validation. Therefore, it is confirmed by validation team that the geographical boundary of each CPA is Nepal.
2	Double counting	Double counting is avoided by assuring that no digester is already included to a different CDM project or CPA. - This is confirmed by the CME	☒	This has been confirmed by unique digester number in the database and GPS coordinates. The validation team has also checked the unique no. engraved on the pipe of

CME Demonstration			DOE Assessment	
Nr.	Eligibility Criteria	Justification	Appropriate and sufficient	Explanation of final result
		based on a) the digester codes listed in the BSP database and b) if necessary also GPS coordinates (the latter applies if biogas projects emerge under the CDM that is not part of the BSP).		digesters on sample basis and found consistent with the data base maintained by BSP Nepal for registered CPA-1 CPA-2, CPA-3 and CPA-4.
3	Technology	AEPC has implemented this CPA as part of the BSP Nepal programme. - All digesters listed in the registered CPA-1 CPA-2, CPA-3 and CPA-4 are household biogas digesters with a sludge and gas holding capacity range of 2-10 m ³ . - Biogas is supplied to a stove with a maximum capacity of 400 l/h leading to a maximum annual gas capacity of not more than 1.86 kWth per stove. - The equipment for each biogas plant installation under registered CPA-1 CPA-2, CPA-3 and CPA-4 are new and not transferred from other project activities.	☒	This has been checked from the digester commissioning reports and technical specification Manual of digester and stove for registered CPA-1 CPA-2, CPA-3 and CPA-4. Therefore, it is confirmed by validation team that: - the biogas digesters deployed in CPA-1. CPA-2, CPA-3 and CPA-4 are of the same type as described in the Design Document, i.e. GGC 2047 model with a sludge and gas holding capacity range of 2 to 10m³ - The activity of the CPA is similar, i.e. the construction of biogas plants at household level
4	Start Date	The start date of a registered CPA-1 CPA-2, CPA-3 and CPA-4 is the date of commissioning of the first biogas digester included to that respective CPA. - The start date of registered CPA-1 CPA-2, CPA-3 and CPA-4 is the date of commissioning of the first digester in these respective CPAs. For example The start of CPA-4 is after the date of commissioning of the last installation included in CPA-3 i.e. 19/02/2011. - The date of commissioning is recorded in the Commissioning Report, which is	☒	This has been checked from the digester commissioning reports of first and last unit included in this registered CPA-1 CPA-2, CPA-3 and CPA-4. Therefore, it is confirmed by validation team that the CPAs are close enough to each other in time.

CME Demonstration			DOE Assessment	
Nr.	Eligibility Criteria	Justification	Appropriate and sufficient	Explanation of final result
		archived and the date recorded in the respective CPA database.		
5	Compliance with applied methodology	The activity replaces non renewable biomass. This is confirmed through Biogas Users' Survey conducted by an independent third party for the biogas digesters implemented by BSP.	☒	The registered CPA-1 CPA-2, CPA-3 and CPA-4 meets all applicability criteria of applied methodology i.e AMS I.E, Version 04/05. Validation team has checked the registered project documents related to CPA-1 CPA-2, CPA-3 and CPA-4 to confirm the same.
6	Diversion of official development assistance	The CPA does not result into the diversion of official development assistance.	☒	This has been validated against ODA nondiversion letter issued from the office of Assistant Director, AEPC. Therefore, it is confirmed by validation team that No ODA is granted in return of carbon credits.
7	Target Group and distribution mechanism	The target groups within the CPA are households.	☒	This has been checked from the plant completion report. The digesters implemented in the range of 2-10 m3 under registered CPA-1 CPA-2, CPA-3 and CPA-4, the owner of the biogas digester is an individual and the feeding material is dung. It has also been checked from the Renewable Energy subsidy policy and plant completion reports that owners of bio digesters received subsidy under the scheme for installation of digesters at household. Hence it is evident that the installation of digesters has been done at household level.
8	Threshold check	Number of biogas digester included in each registered CPA-1 CPA-2, CPA-3 and CPA-4 shall not exceed 20,000 units, which assures compliance with the small scale limit of 45MWth.	☒	The no of digester included in this CPA are less than 20,000 as evident by validation team from the BSP database maintained by BSp Nepal.
9	Other / Voluntary action	The owners of the digesters listed in the registered CPA-1 CPA-2, CPA-3 and CPA-4 have signed an agreement in which it allows	☒	This has been checked from the agreements signed between the owner of digester and AEPC. This is confirmed by the validation team that there is no regulation

CME Demonstration			DOE Assessment	
Nr.	Eligibility Criteria	Justification	Appropriate and sufficient	Explanation of final result
		AEPC to market the emission reductions from the installation and operation of the digester. - Digesters implemented in these CPA's is a voluntary action and not mandated by the Government of Nepal		in Nepal which mandates the use of Biogas digester at household level. Therefore, it is confirmed by validation team that end users acknowledge the transfer and cease of carbon credits to the CME.

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

ANNEX 4: RESPONSES TO THE GS PRE-FEASIBILITY ASSESSMENT

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
Comment/Request 1. Applicable Methodology			
1	The project shall apply the must recent version of the methodology and relevant tools ⁴ available at the first time of submission to the Gold Standard (this is the submission of the design consultation report), please update the project accordingly. In case the applicable version doesn't lead a change in the applicability nor affect the project design, the project can remain with the same version used under the CDM, but this must be well explained in the GS Passport and shall be discussed in the GS Validation report (the DOE shall confirm this is the case).	<i>As per UNFCCC website, the most recent version of AMS-I.E. when submitting the documents for GS validation (09 October 2014) was version 5.0, but PoA and CPA 1 applied the most recent methodology version at the time of submission to CDM for registration, which was version 4.0. This difference, however, does not lead to significant changes in the applicability or the project design. This has been explained and discussed in both PoA and CPA 1 GS passport.</i>	Gold standard PoA Passport and CPA passports are verified by validation team to include the information w.r.t changes between ver.4 and ver.5 of the applied methodology. As per latest methodology it does not lead to change in the applicability nor affect the project design. Validation team has checked the first application made to GS board by PP and confirms that ver.4 was applicable at that time which is correct and OK.
2	The period within which the project documentation must be submitted for Gold Standard validation in order to use the version of the methodology or tool applicable at the time of first submission is 6 months. If the project is not submitted for Gold Standard validation within the 6-month deadline, then the latest available version of the methodology and tool(s), at the time of submission for validation, must be applied. The time of submission for DOE validation is the date when the DOE is contracted for the validation of the project.	<i>The DOE was contracted on 14 August 2014, while the date of first submission of all GS passports was on 14 October 2014 – within the 6-month limit set by GS. Evidence/Proofs of both dates were sent to the DOE.</i>	Justification submitted by PP is accepted by validation team. Date of contract signed with DOE is Aug. 2014 and first submission of GS passports was October 2014. Therefore, version 4 of the applied methodology is correctly applied in PoA and CPA 1 passport. It is worthwhile to mention here that even ver.5 of the methodology does not lead to change in the applicability nor affect the project design.
Comment/Request 2. Legal Documents			
3	The CME shall submit the ODA declaration Form, GS Terms		ODA declaration is now included in GS

⁴ With the exception of the tool to demonstrate additionality or Combined tool to identify the baseline scenario and demonstrate additionality

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
	and Conditions, and the cover letter for the PoA and CPAs.	<i>Signed ODA declaration is attached to GS passports; it will also be uploaded to the GS Registry separately. GS Terms and Conditions as well as the cover letter will be signed and submitted before requesting registration.</i>	passports. ODA letter is checked by validation team and found to be OK. As the project is located in a country part of the OECD Development Assistance Committee's OD recipient list, the project participant has provided an ODA Declaration Form as part of documents to be submitted as per GSV2.2, Annex D. ODA Declaration Form provided in Annex D of the Toolkit with the Project Design Document in connection with validation is checked and found to be signed.
Comment/Request 3. Validation			
4	The PoA and the CPA submitted for registration shall be fully validated by the DOE. A 6 weeks review will take place for registration. In case the CME would like to submit along with the PoA more CPAs for registration, all the CPAs will follow the same procedure and shall be listed at the moment of request the registration. In case full PFA are applicable, the CPAs shall already finalize that process. The CPAs subsequently submitted may follow the inclusion procedure. Retroactive CPAs may be required to apply full PFA or Fast track depending on the case discussed in Annex F.	<i>The PFA only refers to PoA and CPA 1 – however, a MoU has been signed with the GS on fast-tracking additional CPAs.</i>	PoA and the CPA 1,2,3 and 4 are validated by validation team. PFA assessment is made by GS for PoA and CPA 1. And as per MOU signed between GS board and atmosfair rest of CPA's i.e. 2,3 and 4 has been validated in same procedure by validation team. There is no major change among CPA's except change in Biodigester and emission reductions numbers. Therefore, a combined validation report is prepared for CPA's.
Comment/Request 4. Stakeholder Consultation			
5	The PoA design consultation is mandatory and must take place in all cases. This consultation is conducted to obtain feedback from governments, relevant national authorities, NGO communities, and other stakeholders on the design framework and expected impacts of the programme, in order	<i>The DC has been conducted between 17 July and 17 August 2014; it has been approved by the GS.</i>	The SFR started after upload of the GS passport on October 9th 2014 and ended on January 26th 2015. A verified by validation team feedback and comments provided during local and design

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
	to ensure it is in line with the national or regional sustainable development goals and priorities. The stakeholders should also be asked their opinion on the right actors/institutions to be involved by the CME as part of the programme. It is essential that feedback be sought on the institutional framework relevant to the programme. Feedback will also be requested on the interaction of the initiative implemented by CME with other ongoing and/or planned initiatives within the geographic boundary chosen. In case the initiatives are overlapping then feedback on synergies and potential conflicts across these initiatives shall be taken into account. This consultation does not necessarily require a live meeting. The CME shall make use of the design consultation template to document this process.		consultation meeting by project proponent. Minutes of meeting, and feedback forms were checked by validation team to confirm that the comments were received and all very positive; no changes to the PoA design became necessary. Relevant section of the PoA DC is checked and found to be correctly updated in this respect.
6	In cases where no activity level consultations are carried out (programme level consultations only), a live LSC meeting is also required during the programme consultation in parallel to the design consultation. The CME shall use the PoA Local Stakeholder Consultation Template for this process and shall give at least a month's notice to stakeholders invited to attend the meeting. A Stakeholder Feedback Round must then also be conducted at programme level. The CME shall also discuss the Continuous Input/Grievance Mechanism as part of the PoA level LSC, including details of the input methods chosen and the appropriateness of these methods. The final outcome shall then be implemented across activities.	<i>A PoA-level local Stakeholder Consultation was conducted on 15 August 2014 in Kavre, according to GS rules. It has been approved by the GS.</i>	Justification submitted by validation and therefore, accepted. Stakeholder consultation has been provided at PoA Level. Section D.2 of the registered PoA-DD is also checked to confirm the same. Nonetheless, The SFR was started after upload of the GS passport on October 9th 2014. Participants of the LSC and DC were asked to comment on the LSC report, draft GS passport and DDs; comments were invited via email and letter which were checked by validation team and found OK.
7	A preliminary approval of the approach chosen must be gained from GS at the LSC Report Review (listing process). GS further assesses this approach during the Registration Review stage, once the validating DOE has also provided its opinion on the approach based on its findings in the field. It	<i>The PoA has been listed. Regarding the input method, detailed explanations were given during the LSC; as an important input channel, the CME Alternative Energy Promotion Centre (AEPC) provides a toll-free service line for biogas users.</i>	The LSC meeting was conducted on 15 August 2014. As verified during the site visit, interview with the PP and review of the minutes of meeting of the LSC discussion on continuous input/grievance

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	shall be noted that the ability of the CME to implement the input methods chosen for Continuous Input/Grievance Mechanism during PoA level LSC, across activities, will also be a factor considered while approving the PoA level LSC approach. In this case, please note that activities will not be listed and publically available in the registry before the approval of the inclusion.		mechanism was in the agenda of the meeting. Feedback form including the questions and clarifications checked to include address the grievance handling issues related to post installation services. Validation team has checked the LSC report and found the information w.r.t same is correctly updated.
Comment/Request 5. Do No Harm Assessment			
8	For programmes doing the DNHA at PoA level only, please remember that the risks with respect to the relevant safeguarding principles shall be identified at the programme level and future activities can only be included in the programme if they are in line with DNHA compliance criteria defined in the PoA-Passport	<i>DNHA was done at both PoA and CPA level. Since CPAs are literally identical, no differences have been identified.</i>	Justification submitted by PP is accepted. Do No Harm Assessment is conducted at PoA and CPA level. Installed technology and project design is same among all CPA's. LSC report is checked by validation team and found to include all the safeguarding principles as part 'Do No Harm' Assessment. Description of their relevance to the project and mitigation measures correctly justified in line with the information included in GS PoA passport. Therefore, it is concluded by validation team that CPA-1, CPA-2, CPA-3 and CPA-4 are in line with the Do No Harm Assessment requirements as determined in the PoA Passport and does not compromise any of the safeguarding principles
9	Safeguarding Principle # 8: Level of risk for Safe Guarding Principle No. 8 must be defined as medium since masonry works environment represent medium risk for project workers e.g Heavy lifts of materials, usages of tools. As mitigation measure PP shall include proper training for all workers (e.g. maximum weight to be lift), and distribution	<i>The comment regarding Safe Guarding Principle No. 8 has been integrated into the GS passport Do No Harm Assessment. As mitigation measure to prevent accidents, workers will receive proper training. Protective equipment such as gloves will</i>	With respect to said safeguarding principle validation team has checked the PoA and CPA passports which sufficiently justified that to prevent accidents, workers will receive proper training and concerned parameter will be monitored. Therefore,

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
	and usage of protective equipment (when applicable). Also Further discussion due to unsafe handling of biogas must be provided. Re-assess risk if needed including the respective mitigation measures in this regard.	<i>be distributed. This will be monitored.</i>	the assessment of project risks is assigned as “medium” risk category.
10	Safeguarding Principle # 9: Although the biodigester reduces significantly the risk of animal/human waste handling compared to the baseline, the anaerobic process does not disinfect the 100% feeding material (human and animal waste). In correct disposal of slurry may pollute water bodies and create hygiene issues. Also Further discussion in this regard must be provided. Re-assess risk if needed including the relevant mitigation measures.	<i>It was explained in the PoA and CPA level passports, that the slurry obtained after fermentation is less polluting than the initial manure; moreover it will be used as fertilizer and this usage will be monitored (indicator 2).</i>	As found during on-site interview with the representative of CME, and also operation of biogas digesters, the validation team confirms that the operation of biogas digesters does not involve the extra water usage, the water collected will be treated by the biogas digester rather than discharging to the nearby water bodies without treatment. Thus the programme activity would not cause negative impact to the water quality and quantity. Further, Slurry release from the biogas units is considered to be an effective fertilizer and soil conditioner; therefore would not have any adverse impact on soil condition. GS PoA and CPA passport are checked to confirm the safeguarding principle is appropriately explained.
11	The opinion from DOE shall confirm that level of risk and justification is provided for the 11 safeguarding principles, and that is correct, also DOE shall confirm mitigation measures have been correctly defined for the safeguarding principles with med-high risk.	<i>The DOE has confirmed the correctness of risk justification and mitigation measures.</i>	Yes, it is confirmed by validation team that the project participant has introduced mitigation measures for the safeguarding principles with a low, medium, high which is in line with the GS Toolkit-2.4.1. GS POA and CPA passport is checked by validation team to confirm that accurate information and the reference sources been included against the mitigation measures.

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
Comment/Request 6. SD Matrix			
12	Whenever the SD matrix assessment is conducted at PoA level only, future activities are included in the programme only if they are in line with sustainable development compliance criteria defined in the PoA-Passport.	<i>The SD matrix assessment was conducted at PoA level. Since CPAs are literally identical, they are in line with the SD criteria defined; CPA passports have been checked by the DOE to confirm this.</i>	Yes, SD matrix assessment is conducted at PoA level only as rest of the CPA's are identical in nature except change in Biodigester number and emission reduction number. GS PoA and CPA passport are checked by validation team that the SD matrix assessment is correct and OK.
13	Air Quality: The CEM shall better analyze the project relevance regarding the MDG for this indicator e.g. the project may impact: MDG target 4 (4.1, 4.2), & 5. Clean indoor air will reduce under-five mortality rate (4.1) and infant mortality rate and the disease burden due to indoor air pollution. It applies to target 5 by improving living conditions and thereby reducing maternal mortality rate. Please elaborate the explanation	<i>MDG targets 4.1 (Under-five mortality rate), 4.2 (Infant mortality rate), and MDG 5 (reducing maternal mortality rate) were included under air quality indicator and explained subsequently.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators i.e. air quality improvement due to project. MDG indicator for the said parameter is correctly included in the GS PoA and CPA passport document. Parameter: Users' perception on smoke Justification against the same is found to correct and appropriate.
14	Water Quality and Quantity: The CEM shall better analyze the project relevance regarding the MDG for this indicator e.g. the project may impact: MDG target 7 (7.8, 7.9). Proportion of population using an improved water source and improved sanitation facility. Water quality will improve if animal and human waste does not, directly or indirectly end up in the water. In addition, the provision of biogas will enable household to sterilize their water.	<i>MDGs 7.8 (use of improved drinking water sources) and MDG 7.9 (use of improved sanitation facilities) were included under water quality and quantity indicator and explained subsequently.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators i.e. Water Quality and Quantity. MDG indicator for the said parameter is correctly included in the GS PoA and CPA passport document. Justification against the same is found to correct and appropriate.
15	Soil Conditions: The CEM shall better analyze the project relevance regarding the MDG for this indicator e.g. the project may impact: MDG target 7. Nutrient loops are closed	<i>MDG target 7 (ensure environmental sustainability) was included under the indicator for soil condition and explained subsequently.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators i.e.

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
	by the use of digester effluent that avoids eutrophication of the soil and water bodies. MDG 7: Ensure environmental sustainability Reduced use of artificial fertilizers. Please elaborate the explanation.		Soil condition. MDG indicator for the said parameter is correctly included in the GS PoA and CPA passport document. Parameter: Use of slurry as fertilizer Justification against the same is found to correct and appropriate.
16	Quality of employment: The CEM shall better analyze the project relevance regarding the MDG for this indicator e.g. the project may impact: MDG 1: Eradicate extreme poverty and hunger. The CEM shall also mention whether the project will provide vocational training programs to employees, medical insurance, etc.	<i>MDG target 1 (Eradicate extreme poverty and hunger) was included under the indicator for quality of employment. Regarding training programs, the project will provide training to masons.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators i.e. Quality of employment. MDG indicator for the said parameter is correctly included in the GS PoA and CPA passport document. Parameter: Trainings for masons Justification against the same is found to correct and appropriate.
17	Livelihood of the poor: The CEM shall better analyze the project relevance regarding the MDG for this indicator e.g. the project may impact: MDG 1: Eradicate extreme poverty and hunger.	<i>MDG target 1 (Eradicate extreme poverty and hunger) was included under the indicator for livelihood of the poor and explained subsequently.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators i.e. Livelihood of the poor. MDG indicator for the said parameter is correctly included in the GS PoA and CPA passport document. Parameter: Improved access to sanitation services. Justification against the same is found to correct and appropriate.
18	The CEM shall provide a justification for the 12 indicators. The DOE's opinion shall confirms that impact assigned and justification provided for the 12 indicators is correct and that mitigation measures have been correctly defined for the	<i>Relevant and trustworthy scientific sources were chosen to prove the validity of the chosen indicators and parameters.</i>	Section F.2 of the GS Passport describes the sustainable development matrix and sustainable development indicators with non-neutral value outlined and

SN	GS pre-feasibility assessment	Response by the project owner	DOE Assessment
	negative indicators		sufficiently justified.

ANNEX 5: APPOINTMENT CERTIFICATES OF THE TEAM MEMBERS



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Indrapal Parmar

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2018-01-06
VCS / ISO 14064-2	Lead Assessor	2018-01-06

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	

191 - Rev. 4, Date: 2015-01-07

191_001-VA000-F20_2015-01-07_rev4.doc

001-VA000-F20 rev3 / 2012-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Pankaj Patel

SCHEME	STATUS	VALID UNTIL
CDM (Validation, Verification)	Lead Assessor	2016-06-21
VCS	Lead Assessor	2016-06-21

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
2.2	Heat Distribution	
3.1	Energy Demand	

31 - Rev. 1 Date: 2014-01-09

Statement_of_Competence_2014_01_09_rev.1.doc

001-VA000-F20 rev3 / 2012-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Ezhilarasu G.

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2017-02-06
VCS / ISO 14064-2	Senior Assessor	2017-02-06

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
13.1	Waste Handling and Disposal

130 - Rev. 3, Date: 2014-02-07

130_001-VA000-F20_2014-02-07_rev3.doc

001-VA000-F20 rev3 / 2012-10-25



Statement of Competence

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Mohinder Amarnath B.J.

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2016-10-28
VCS / ISO 14064-2	Lead Assessor	2016-10-28

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal Energy Generation
1.2	Renewable Energies
3.1	Energy Demand
4.1	Cement Sector
4.5	Waste Heat Recovery*
13.1	Waste Handling and Disposal

* Limited to validation and verification contracts signed by 17 June 2013

053 - Rev. 3, Date: 2013-10-29



Statement of Competence

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Stefan Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2017-07-27
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2017-07-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	
1.2	Renewable Energy	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
2.2	Heat distribution	
3.1	Energy demand	
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	

163 - Rev. 3, Date: 2014-07-28