

Validation report form for Gold Standard Project activity

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Title of the Project Activity (PA)	Smokeless Living in rural areas of India
GS Reference Number	GS11988
Version number of the validation report	3.0
Completion date of the validation report	12/09/2023
Version number of PDD to which this validation report applies	Version 04, dated 09/09/2023
Start Date of PA	10/06/2022
Project Participant	Greneity Infocom Service Private Limited
	Samagra Vikas Mission
Host Party	India
SDG Targeted:	 SDG 3: Good health and wellbeing (3.9) SDG 7: Affordable and Clean Energy (7.1) SDG 8: Decent work and Economic Growth (8.5) SDG 13: Climate Action (13.2)
Applied methodologies and standardized baselines	AMS-I.E. Switch from non-renewable biomass for thermal applications by the user - Version 13
Mandatory sectoral scopes	01
Activity Requirements applied	Community Services Activities
Product Requirements applied	GHG Emissions Reduction & Sequestration Product Requirements
Name and UNFCCC reference number of the VVB	E-0052:Carbon Check (India) Private Limited
Name, position and signature of the approver of the validation report	Vixash L. Sist
	Vikash Kumar Singh, Compliance Officer

SECTION A. Executive summary

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Purpose and general description

Greneity Infocom Service Private Limited (the PP) has appointed the VVB, Carbon Check (India) Private Ltd. to perform an independent validation of the Gold Standard PA "Smokeless Living in rural areas of India" in India (hereafter referred to as "PA"). This report summarises the findings of validation of the project, performed on the basis of Gold Standard criteria Gold standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting. This report contains the findings and resolutions from the validation and a validation opinion.

The project activity objective is to replace the commonly used inefficient wood fired mud stove technology, with efficient biogas-based cook stove, which is clean and sustainable. The project activity involves installation of household biogas plants located in the state of Chhattisgarh, India with capacities – $2m^3$ and $3m^3$. The generated biogas from the plants will be used in the households of Chhattisgarh, India for the purpose of cooking and other thermal energy needs as confirmed from the site visit and baseline survey report/09/. All the biogas plants are constructed and maintained by Samagra Vikas Mission (SVM) as verified from the technical specification sheets/03/and commissioning certificates/23/. The number of plants involved in the project activity is cross verified with the data base/12/, undertaking letter submitted by the PP/20//21/ and interview with the PP. The thermal energy generated through the project activity replaces the equal amount of thermal energy which otherwise would have been supplied from the woody biomass based stove technology. Therefore, the project activity helps in reducing 32,452 tCO₂/year

The project activity has been implemented in households. The PA targets multiple beneficiaries and locations in the Chhattisgarh, with an initial focus on the rural households. Emission reductions attributable to the PA are additional to any that would occur in the absence of the PA in accordance with the Gold standard for global goals (GS4GG) requirements for additionality. Greenhouse gas (GHG) emission reductions achieved through saving of non-renewable biomass will result in carbon credits following GS certification rules and procedures.

The purpose of validation is to have a thorough and independent assessment of the proposed PA against the applicable GS requirements, in particular, the project's baseline, monitoring plan and the PA's compliance with relevant Gold standard criteria and host Party criteria. These are validated to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all Gold Voluntary projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of voluntary emission reductions (VERs).

Location

Host Party(ies): India

Region/State/Province: Chhattisgarh

City/Town/Community: various district of Chhattisgarh

Scope of the validation

The validation scope is defined as the independent and objective review of the project design document (PDD /01/). The PDD /01/ is reviewed against the relevant criteria (see above) and decisions by the Gold standard, including the approved baseline and monitoring methodology.

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

While carrying out the validation, CCIPL determines if the PA complies with the requirements of the paragraph 37 of the CDM Modalities & Procedures, the applicability conditions of the selected methodology /B03/, guidance issued by the Gold Standard and also assess the claims and assumptions made in the PDD /01/ without limitation on the information provided by the project participants.

Validation Process

The validation consists of the following four phases:

- i. A desk review of the project design documents
 - A review of the data and information;
 - Cross checks between information provided in the PDD /01/ and information from sources with all necessary means without limitations to the information provided by the project proponent;
 - Submission of Validation work plan to the PP
- ii. Follow-up interviews with project stakeholders
 - Interviews with relevant stakeholders in host country with personnel having knowledge of the project development via telephone, email, online etc.;
 - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;
- iii. Reference to available information relating to projects or technologies similar projects under validation and review based on the approved methodology /B03/ being applied for the appropriateness of formulae and accuracy of calculations.
- iv. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The report is based on the assessment of the PDD /01/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodology /B03/ and their underlying formulae and calculations.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed PA thus confirming the Project design in the documents is sound and reasonable and meets the stated requirements and identified criteria.

Conclusion

The selected baseline and monitoring methodology /B03/ is applicable to the project and correctly applied. Carbon Check (India) Private Ltd. therefore recommends the project to the Gold Standard for registration.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the GS PA "Smokeless Living in rural areas of India", as described in the PDD /01/, meets all applicable GS requirements, including those specified in the GS4GG Principles and requirements version 1.2, GS4GG activity requirements version 1.2, GHG Emissions Reduction & Sequestration Product Requirements Version 2.1, meets host country criteria and has correctly applied the methodology AMS-I.E - Switch from non-renewable biomass for thermal applications by the user, version 13.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team members

No	Role	T y	Last name	First name	Affiliation	Involvement in

						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader / Local Assessor/ Technical Expert	IR	Mathew	Vijay	CCIPL	Х	Х	Х	Х
2.	Trainee Assessor	IR	Suhail K	Muhammed	CCIPL	Χ		Χ	Х

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer IR		С	Indumathi	CCIPL
2.	Approver IR		Singh	Vikash Kumar	CCIPL

Audit Team Experience:

Vijay Mathew: is an appointed Team Leader. He has been involved in carbon offset mechanisms/sustainability standards for more than 14 years. He has completed his Master of Science (M.Sc.) in Energy Systems, Master of Business Administration (M.B.A) and Master of Commerce (M.Com). He has also completed his Post Graduate Diploma in International Business Operations (PGD-IBO) and Post Graduate Diploma in Fire Protection and Safety (PGD-FPS). He is certified Lead Auditor/Assessor in various standards viz. ISO 9001:2015, SA 8000: 2014, ISO 14001:2015, ISO 14064-1:2018, ISO 50001:2018, ISO 45001: 2018 and BS OHSAS 18001: 2007 etc. He has experience in the field of Carbon Offsets both in the regulatory and voluntary front, including project validation. He has participated in GS, VCS, GCC and CDM validations and validations. He has been involved in verification/validation of more than 100 Carbon offset projects. He has also attended several Gold Standard VVB webinar trainings and GS4GG trainings. He is qualified as technical expert for TA 1.1, 1.2, 3.1,13.1 and 13.2 under CDM SS/TA categorization.

Indumathi C: She is appointed Team Leader /Technical Expert for technical area TA 1.1, 1.2,3.1,13.1 & 13.2 and Technical Reviewer. She has actively been involved in the validation and verification or internal technical review of more than 200 GHG offset projects including projects with SDG component She is having more than 13 years of experience, she is certified Energy Manager, Bureau of Energy Efficiency, Govt. of India. She carried out technical reviews for climate change mitigation projects under different carbon credit mechanisms (UNFCCC, Gold Standard and Voluntary Carbon Standard) for various sectors like renewable energy (solar, wind, hydro, biomass), energy efficiency (cook stoves) and waste to energy (biogas).

Muhammed Suhail K: He is appointed as Trainee Assessor and attended many GS workshops/ webinars.

SECTION C. Means of validation

C.1. Desk/document review

>> List of all documents reviewed or referenced during the validation is provided in Appendix-3.

C.2. On-site inspection

	Duration of on-site inspection: 14/08/2023 to 16/08/2023							
No.	Activity performed on-site	Site location	Date	Team member				
1.	General information about the project. Barriers faced/overcome in the processes (additionality)	Chhattisgarh						

	 Local Stakeholder consultation processes Legal/ Statutory Clearances and Agreements Signed Baseline determination Application of appropriate Methodology Operation and maintenance Procedures Technical details of project Data monitoring and storage practices Calibration and maintenance requirement of the equipment Monitoring Methodology 		14/08/2022to 16/08/2022	Vijay Mathew
2.	Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PDD	Chhattisgarh	14/08/2022to 16/08/2022	Vijay Mathew

C.3. Interviews

		Interviev	wee			
No.	Last name	First name	Affiliation	Date	Subject	Team member
1.	Garg	Ms.Shivani (Managing Director)	Greneity Infocom Service Private Limited	14/08/2022 to 16/08/2022	Discussion on Project Design and eligibility criteria Proposed Technology to be used in the PA PP Management System Manual Discussion on project funding and involvement of any ODA Discussion on the PA PDD and ER sheet Discussion on the GS preliminary review comments Sustainability aspects of the PA SDG impacts	Vijay Mathew
2.	Bias	Mr. Sitaram	Samagra Vikas Mission	14/08/2022to 16/08/2022	Discussion on Project Design and eligibility criteria Proposed Technology to be used in the PA PP Management System Manual Discussion on project funding and involvement of any ODA Sustainability aspects of the PA SDG impacts Safeguarding principles	Vijay Mathew
3.	Prasad	Ishwar	RET (Renewable Energy Technician) and Local stakeholder	14/08/2022to 16/08/2022	Discussion on local stakeholder consultation and implementation procedures.	Vijay Mathew
4.	Sharma	Mr. Arjun	Greneity Infocom Service Private Limited	14/08/2022to 16/08/2022	Discussion on the implementation procedures and Operation and maintenance.	Vijay Mathew
5.	Roy	Chaman	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
6.	Ram	Ganga	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew

7.	Kumar	Manoj	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
8.	Netam	Rajaram	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
9.	Ram	Tula	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
10.	Ram	Mansha	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
11.	Narayan	Satya	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
12.	Sahu	Motim	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
13.		Raminder	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
14.	Sahu	Motim	Households	14/08/2022to 16/08/2022	Local stakeholder consultation and Baseline survey of the project activity	Vijay Mathew
15	Singh	Sudarshan	Households additional	14/08/2022to 16/08/2022	Local stakeholder consultation and Monitoring survey of the project activity	Vijay Mathew

C.4. Sampling approach

As the target population is homogeneous, PP has proposed simple random sampling plan using 90/10 as confidence/precision. This is in line with the applied methodology /B03/. The sample size for each parameter is determined following guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0 (EB86, Annex 4) /B08/.

In line with paragraph 26 of the Sampling Standard, the validation team has applied acceptance sampling approach through remote interviews on the baseline survey as part of validation. The project participant had applied sampling approach to determine the baseline, a representative baseline survey /10/ was conducted by the representatives of Project participant. The validation team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B08/.

Applying paragraph 39 (c) of the sampling standard, version 09 /B08/, a sample size of 11 households was chosen (with no discrepant records). A sample size of 11 for was determined, based on an AQL of 0.5% and UQL of 20%; producer risk and consumer risk of 10 % each in determining the DOE's sample size Acceptance number (c) thus determined for the sample is 0. However, DOE

interviewed 11 and 2 non monitored households samples from the baseline survey done by project participants.

The information provided in the baseline survey /10/, has been cross checked during the Onsite visit. As a part of acceptance sampling, the Validation team could confirm the baseline survey data /10/ with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B08/.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Project design document	3	1	-
Identification of project type	-	-	-
Description of project activity	-	-	-
Management system	-	-	-
Start date, crediting period type and duration	1	1	-
Environmental impacts	-	-	-
Local stakeholder consultation	-	-	-
Application and selection of methodologies and	-	-	-
standardized baselines			
 Application of methodologies and 	-	-	-
standardized baselines			
 Deviation from methodology and/or 	-	-	-
methodological tool			
 Clarification on applicability of methodology, 	-	-	-
tool and/or standardized baseline			
 Project boundary, sources and GHGs 	-	-	-
- Baseline scenario	1	1	-
 Demonstration of additionality 	1	-	-
 Proof of Project eligibility 	-	-	-
 Safeguarding Principles Assessment 	-	2	-
 Estimation of emission reductions or net 	2	1	-
anthropogenic removals			
- Monitoring plan	-	-	-
Sustainable development co-benefits	-	1	-
Stakeholder Inputs & Grievance Mechanism	1	1	-
Others (GS Preliminary review)	=	3	-
Total	9	11	-

SECTION D. Validation findings

D.1. Project Activity

D.1.1. Project design document

Means of validation	DR,I
Findings	CAR 10, CL 04, CL 06 and CL07 have been raised in this regard and successful resolved. Please refer appendix 4 for details.
Conclusion	The PDD for the project activity "Smokeless Living in rural areas of India", in India, version 04 of 09/09/2023, submitted by Greneity Infocom Service Private Limited. has been the basis for the validation process.

Validation team confirms that the PDD is prepared using GS4GG PDD template
version 1.5 of 29/06/2023 which is the latest and correct template to use and hence,
this requirement has been appropriately met.

D.1.2. Identification of project type

Means of validation	DR,I
Findings	-
Conclusion	The proposed GS project activity falls under renewable energy supply as it involves generation of biogas using the digesters, which replaces the conventional fire wood to meet the thermal energy needs of households of Chhattisgarh in India.
	CCIPL based on review of PDD and interviews confirms that the proposed GS PA complies with Community Services Activity Requirements V1.2 and it is not A/R PA. The assessment in compliance with § 6.3.17 of GS Validation and Verification Standard V1.0 /B02/ and GS4GG requirements /B01/.

D.1.3. **Description of PA**

Means of validation	DR,I
Findings	
Conclusion	The description of the project activity contained in the PDD /01/ is transparent, detailed and provides a clear overview of the project. Its content was confirmed by means of document review /01/ and interviews to validate the accuracy and completeness of the project description.
	The purpose of the project activity is a retroactive project, includes 10,339 digesters which were implemented between June, 2022 and November, 2022 to the household in the state namely Chhattisgarh of India which replaces traditional cooking stoves. The project stoves are having better efficiency compared to baseline cooking system and therefore results in saving firewood compared to baseline scenario. All the biogas plants are constructed and maintained by certified Renewable Energy Technicians (RETs) which work under the framework conditions of Samagra Vikas Mission (SVM) the developer of the project activity. Each project biogas user included in the project activity has entered into an agreement with SVM to be part of the project activity and thereby transferring the carbon credit ownership rights to SVM /08/. SVM and Greneity Infocom Service Private Limited has agreement for the right of carbon credit generated from the project activity and invest necessary financial needs for the project /09/. Thereby, project ownership and transfer rights are clearly defined and in place.
	The thermal energy generated from use of biogas under the project activity replaces the equal amount of thermal energy which otherwise would have been supplied from the woody biomass (firewood) based stove technology. Thus, the project helps in mitigating harmful GHGs in the atmosphere. As per baseline study /10/, baseline quantity of firewood consumed in pre-project scenario is as given below depending on the capacity of system. Capacity of biogas system installed capacity 2m3 & 3m3.
	As per the baseline survey report /10/ the average fuel wood consumption 12.8 kg fuelwood daily i.e. 4.70 tons of fuelwood annually. Accordingly, 10,339 biogas system of different capacity results in reduction of 32,452 tCO ₂ emission reductions per year.
	The project activity is the green field activity, which involves installation of new household biogas system in the households where prior to the implementation of the project activity fire wood was in use for thermal energy needs. This was verified during on-site visit and from the baseline survey report /10/. The baseline scenario is the use of fire wood for domestic thermal energy needs. Hence, it complies with the applied methodology /B03/.

Technology 'Deenbandhu model' used for the biogas systems. Deebandhu Model bio digester is the fixed underground digester chamber, which converts the cow dung and other organic waste material fed through the inlet chamber into biogas by anaerobic digestion. The methane gas generated rises and released through the outlet chamber. The output slurry or waste generated from the digester will be used as fertilizer. The technology is MNRE (Ministry of New and Renewable Energy), India approved technology.

The project is envisaged to include household biogas plants installed in the states of Chhattisgarh in India commissioned from 25/06/2022/22/ onwards with a target plant of 10,339 in total. In accordance with GS4GG PA requirements the validation team has assessed the geographical boundary of the PA. This was as checked and confirmed by reviewing the PDD /01/ and on-site visit. Review of PDD reveals the definition of the boundary for the PA in terms of a geographical area has been transparently defined, and used in establishing the boundary of the PA.

The PP has taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary. This conforms to the requirement of Gold standard - Validation and Verification Standard V1.0 /B02/. and GS4GG PA requirements. /B05/

As per the GS4GG clause 3.4.3 (principle and requirement) states 'the Project start date shall be the earliest date on which the Project Developer has committed to expenditures related to the implementation of the Project'. In this case the start date is the earliest date of purchase order placed for the biogas Chullahs from the supplier /25/. It has been verified that 10/06/2022 is the date on which the PP has committed first expenditure for the project activity which represents and justifies the start date of the project activity. It has been noted that the project is a retroactive project which means the start date has occurred prior to the first submission of preliminary review information to GS (clause 3.4.7 under principle and requirement).

The first submission to GS for preliminary review was done on 31/05/2023 as per the sustain cert application portal details. Clause 3.4.7.4 (principle and requirement) states 'Retroactive Projects shall submit for Preliminary Review within 1 year of the Project Start Date'. In that way the start date of 10/06/2022 for this retroactive project meets the GS requirements. The commissioning reports of first batch of biogas projects on 25/06/2022 and the purchase order placed for the biogas Chullahs was on 10/06/2022 was verified by the validation team /25/ and confirms the start date to be accurate.

Renewal crediting period has been chosen for the project, starting from 25/06/2022 or from the date prior to two years from the date of registration with GS registry whichever is later. Since, it is the retroactive project, PP has chosen the period 2 years prior to the date of registration. This is in line with GS requirements.

PA using methodology AMS-I.E. Version 13 /B03/ will replace energy generated due to biogas which replaces non-renewable biomass under project activity. This conforms to the requirement of §7.5.4, 7.5.5, 7.6.1 and 7.6.3 of Gold standard - Validation and Verification Standard V1.0 for PAs /B02/.

From the desk review of PDD /01/ and interviews of the PP representatives, it is revealed that this Project does not involve any ODA funding. Thus, the validation team considers no ODA funding has been involved under this Project. This is further confirmed by the undertaking /19/ provided by the PP.

Based on assessment above, CCIPL confirms that the description of the proposed Gold standard PA in the PDD is accurate and complete and it provides an understanding of the PA, and the project is in line with the applied methodology /B03/ and GS4GG requirements /B01/.

D.1.4. Management system

Means of validation	DR,I
Findings	
Conclusion	Validation team reviewed the PDD /01/ confirms that clear and transparent information about responsibilities, records handling, training, technical review procedures, record keeping, documentation control and measures for continual improvements. The same has been confirmed during the on-site visit interviews with representatives of PP and document review /01/. The validation team concludes that the operational and management plan described in the PDD /01/ is complete. This is deemed appropriate by the validation team. Greneity Infocom Service Private Limited and Samagra Vikas Mission are the Project Participants (PP) of this PA. Greneity Infocom Service Private Limited is the entity which communicates with the Gold Standard/SustainCert act as a Project developer. Their Roles & Responsibilities/ Competencies have been provided in the section B of the GS PDD. Validation team confirms the compliance of the requirements of GS4GG requirements and Gold standard - Validation and Verification Standard V1.0/B02/.

D.1.5. Start date and duration of PA

Means of validation	DR, I
Findings	CAR 01 and CL03 had been raised in this regard and successfully resolved. Please refer appendix 4 for details
Conclusion	Start date of the PA is 10/06/2022 /25/ is the date on which the PP has committed first expenditure for the project activity which represents and justifies the start date of the project activity. The validation team also reviewed the PDD /01/ and found that the duration of the PA is in line with the crediting period requirement/25/. In this case the start date is the earliest date of purchase order placed for the biogas Chullahs from the supplier /25/. Based on the above assessment, the validation team concludes that the description and determination of the start date of the proposed PA is in conformance with the
	requirements of paragraph 3.1.1 of GS4GG Project of Activity requirements version 1.2./B05/

D.1.6. Environmental impacts

Means of validation	DR,I
Findings	-
Conclusion	The project does not have any negative environmental impact and does not require any specific licence/approval from host country. Other positive environmental impacts are discussed in section D.3 below. Therefore, validation team confirms that the project does not result any negative environmental and social impact and meets the sustainable development criteria as defined by GS requirements.

D.1.7. Local stakeholder consultation

Means of validation	DR,I
Findings	CAR07 and CL05 had been raised in this regard and successfully resolved. Please refer appendix 4 for details
Conclusion	The local stakeholder consultation is found conducted following guideline as outlined in GS4GG 'stakeholder consultation & Engagement procedure, requirement and guidelines' and a stakeholder consultation report is prepared /15/. VVB cross checked the information provided in the stakeholder report during document review. The stakeholder meetings were held on 21/05/2023 at Community hall, Village: Ajabnagar, Block: surajpur, District: surguja Chhattisgarh, India.

The stakeholders were invited via local newspaper advertisement, notice in public places and personal invitations and the documents were made available to the VVB. The same also confirmed from stakeholders during site visit. All the steps found performed as per the guideline. No negative comment or grievance found recorded during the stakeholder meeting. VVB also noted during site visit that no negative comments from stakeholders from the project activity. It is also noted that a continuous grievance mechanism as detailed during stakeholder meeting is found in practice at site. Stakeholders are found aware of continuous grievance mechanism system. It is also noted from PP, the feedback round as required under the GS started immediately after the end of the stakeholder meeting and stakeholders were asked to provide feedback to the concerned personnel within 2 months after the stakeholder report is circulated. Email to relevant stakeholders along with the project documents are circulated on 20/04/2023. However, until 20th, June 2023 no comment received. Since, a continuous grievance mechanism is in place the feedback round meets the GS4GG requirements.

Validation team has checked the supportive document i.e., Minutes of LSC meeting, public invitation, personal invitations, Email to stakeholders, Attendance sheet, LSC evaluation forms and photos /14/ to confirm the LSC and found inline with the GS4GG STAKEHOLDER CONSULTATION AND ENGAGEMENT REQUIREMENTS.

Since the project is a retroactive project (Start date of the project is 10/06/2022), PP has conducted integrated stakeholder consultation and stakeholder feedback round as per the requirement of para 6.1.4 of GS4GG STAKEHOLDER CONSULTATION AND ENGAGEMENT REQUIREMENTS Version 1.2 which is found acceptable. An email and form invitation were sent to the stakeholders on 20/04/2023 along with the project documents. Stakeholders feedback Round (SFR) was from 20/04/2023 and 20/06/2023. As discussed with PP, no comments have been received.

D.1.8. Application of methodologies and standardized baselines

Means of validation

The small-scale project activity utilizes Version 13.0 of AMS-I.E: "Switch from Non-Renewable Biomass for Thermal Applications by the User" /B04/.

Under section B.2 of the PDD /01/, project has been assessed for all the applicability

conditions of the applied methodology.				
No	Applicability conditions in Version 13.0 of AMS-I.E	Characteristics of the project activity	VVB Justification	
1.	Project participants are able to show that non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	Survey was conducted to check since when villagers were using firewood. It is evident from the survey that all villagers have been using firewood for more than 35 years hence meets the criteria.	The validation team reviewed the baseline survey conducted by Klimate Shield Pvt Ltd /10/, This is deemed appropriate to the Validation team. Thus, the eligibility criteria has been met for the new project activity instances under this group project.	
2.	In the case that technologies using renewable biomass are used under the project activity, this	Biomass is not used in the project activity. Hence, the conditions are not applicable.	The project is biogas- based cooking system. Biomass is not used in the project activity. The same is confirmed during	

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methodology is	the onsite visit. Hence,
applicable where all	the condition is not
emissions related to	applicable
processing of	
biomass are fully	
accounted for and	
biomass is sourced	
from biomass	
residues and/or a	
dedicated plantation	
of the CDM project	
activity, meeting the	
following conditions:	
(a) For projects that	
use biomass	
residues, prior to the	
implementation of	
the project activity,	
the biomass	
residues have not	
been collected and	
used but been left	
for decay and would,	
in the absence of the	
project activity,	
continue to be left	
for decay; and	
(b) For projects that	
use biomass	
residues from a	
production process	
(e.g. production of	
sugar or wood panel	
boards), the	
implementation of	
the project does not	
result in an increase	
of the processing	
capacity of raw input	
(e.g. sugar, rice,	
logs, etc.) or in other	
substantial changes	
_	
O ,	
process; and	
(c) The biomass	
used by the project	
facility is not stored	
for more than one	
year; and	
(d) In the case	
biomass from	
dedicated	
plantations are	
used, the	
applicability	
conditions of	
TOOL16 "Project	
and leakage	
emissions from	
biomass" are	
satisfied.	
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3.	For electric cook stoves with integrated renewable energy device or with grid connected renewable energy system employing net metering, project participants shall demonstrate that, on an annual basis, at least 80% of the electricity generated is consumed by the electric cook stoves (i.e. 20% or less of electricity is consumed by other loads connected).	The project does not involve any electric cook stove and hence the condition is not applicable for the project.	The project does not involve any electric cookstove. The same is confirmed during the onsite visit and hence the condition is not applicable for the project
4.	For electric cook stoves, in all cases under paragraph 2(d) above where back-up diesel generators are used, this methodology is only applicable when no more than 1% of total electricity supply occurs from back up diesel generators on an annual basis.	The project does not involve any electric cook stove and hence the condition is not applicable for the project.	The project does not involve any electric cookstove. The same is confirmed during the onsite visit and hence the condition is not applicable for the project
5.	Under this methodology, emission reductions cannot be claimed only due to fuelswitch aspect and proposed project activities shall introduce new renewable energy based technologies, i.e. technology switch is also involved.	The project activity involves technology switch from conventional firewood based cooking system to renewable biogas based cooking system. Hence, the criteria are met.	Based on the on-site visit and document review, the technology involves switch of conventional firewood cooking to biogas based cooking technology. Hence meets the methodology criteria.
6.	Project participants shall describe in the PDD/PoA-DD the proposed method for distribution of project devices and how the double counting of emission reductions has been addressed, for example, using methods such as unique	Each of the biodigesters shall be allocated a unique id against each end users. End user and project implementer shall have an agreement to avoid any double counting.	The validation team by means of on-site visit interviews confirms that the proposed method for installation of project devices includes the method to avoid double counting of emission reductions such as unique identifications of product, end-user details (name, address etc). Therefore, the

	7.	identifications of product and enduser locations (e.g. programme logo), to prevent double counting of emission reductions from the project devices (e.g. between end users, distributors and producers of stoves, producers of renewable energy, producers of processed renewable biomass). For project activities introducing bio ethanol cook stove, project participants shall demonstrate	The Project is using biogas digesters and bio- ethanol is not used and safety requirement does not original bars. Honor the	validation team confirms that the record keeping system will eliminate double counting. The same is confirmed from the project database The bio- ethanol is not used related to the project activity. The same is confirmed form the onsite visit.
Findings	-	that the bioethanol cook stove are designed, constructed and operated to the requirements (e.g. with regard to safety) of a relevant national or local standard or comparable literature. Latest guidelines issued by a relevant national authority or an international organization may also be used.	arise here. Hence, the criteria is met.	Hence, Not applicable.
Conclusion	- CCIPL I	nereby confirms that the	e selected baseline and	monitoring methodology has
	been ap all the a	proved by Gold standar	rd, and is applicable to the herein and the selected	e Project, which complies with version is valid at the time of

D.1.9. Deviation from methodology and/or methodological tool

Means of validation	No deviation from the applied methodology or methodological tool is applied in the
	project activity.
Findings	N/A
Conclusion	N/A

D.1.10. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	No clarification on the applied methodology or methodological tool is applied in the
	project activity
Findings	N/A
Conclusion	N/A

D.1.11.**Project boundary, sources and GHGs**

Means of validation	According to § 16 of applied methodology AMS-I.E. Version 13.0, "The project boundary is the physical, geographical site of the use of biomass or the renewable energy."
	The information was validated during the On-site visit conducted by the validation team and same has been demonstrated in section B.3 of the PDD.
Findings	-
Conclusion	The project boundary confirmed during the on-site visit along with the documentary evidence was found in conformance with the applied baseline methodology. All sources of GHG emissions required by the methodology have been included in the project boundary and are justified in reference to the project activity. There are no project emissions/leakage emissions of any sort which are not addressed by the applied methodology occurring because of the project activity. There are no project emissions/leakage emissions of any sort which are not addressed by the applied methodology occurring because of the project activity.

D.1.11.1.Baseline scenario

D.1.11.1.Baseline	
Means of validation	DR, I
Findings	CAR 06 and CL02 had been raised in this regard and successfully resolved. Please refer appendix 4 for details
Conclusion	As per applied methodology AMS-I. E, Version 13.0, the baseline is pre-defined as "the use of fossil fuels for meeting similar thermal energy needs as those provided by the project devices".
	In order to independently assess the primary fuel used for cooking purpose, the assessment team interviewed both project and non- project households. The Zeist of interview is provided below:
	Crop residues: it was confirmed by users that wheat, paddy, mustard and sunflower are major crop in the region and residue of these crops (straw and husk) has economic value as these are preferred by industries as primary fuel in boilers. Farmers and aggregators of the region sell these residues to industries and hence same cannot be considered as primary fuel for cooking purposes.
	Dung cakes: During interview it was confirmed by users that dung cakes cannot be considered as primary fuel for cooking purposes due to following reason: •Large amount of smoke generation during combustion, poor ventilation and small sizes of houses •Difficulty in combustion due to high moisture content especially during rainy and winter season •Bad odour generation during combustion •Cultural and other issues
	LPG: Majority of household don't have LPG connection and those who got initially under Pradhan Mantri Ujjwala Yojna (PMUY) in 2016-17 had also stopped using it due high refilling cost and availability of fuel wood free of cost or at cheaper cost. From the summary provided above it can be safely concluded that the survey conducted by independent third party appointed by Project developers reflects the ground reality and firewood is primary fuel used in the region. Further, the assessment team verified the Survey and KPT methodology adopted by the independent agency to crosscheck whether the KPT was conducted in accordance with requirements of clean-cooking protocol. Assessment team verified the KPT results conducted in both project and non -project households and found it be in reasonable range. Assessment team confirms that there is no publicly available information/literature available with regards to firewood usage in the project area. All the GS registered projects have adopted survey approach to establish the same. Therefore, baseline scenario identified is credible for the

project activity. The baseline survey was performed by a third party covering various districts of Chhattisgarh/10/.

Further, validation team has crosschecked the public literature available related to the primary fuel usage in Chhattishgarh. As per the Ministry of Statistics, around 93% of the total rural population in Chhattisgarh is reliant on fuel wood. Validation team confirms that the baseline scenario is identified as per the applied methodology. All data parameters are used correctly while estimating the baseline emissions. The baseline scenario represents the most possible scenario in absence of the project activity. The same is also justified in section B.4 of PDD.

This is in conformance with §12.1.5 (b) of GS4GG Project Activity requirements version 1.2.

D.2.1. Demonstration of additionality

Means of validation	DR,I
Findings	CL 08 had been raised in this regard and successful resolved. Please refer appendix 4 for details.
Conclusion	As per paragraph 4.1.9 of GS4GG Community services activity requirements, version 1.2, Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of design certification: (a)Positive list (Annex B of this document) (b)Projects located in LDC, SIDS, LLDC (c)Microscale projects
	PP has demonstrated additionality as per paragraph 1.1.3 of Annex B – Positive list of GS4GG Community services activity requirements, version 1.2, Project activities solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in <= 1.8 GWhth of energy savings per year or <=600 tonnes of emission reductions per year are deemed automatically additional. As per clause 3.5.1.5 of GS4GG principles and requirements a retroactive project must submit project documents within one year of the project start date. PP has submitted initial project documents on 10/05/2022 to GS. Therefore, the prior consideration is met for the project activity as per GS4GG rules. Ongoing Financial Need: As per clause 3.5.2.2 of GS4GG principles and requirements/B01/, the proposed project activity falls under the 'Positive List' and hence under Principle 5 – Financial Additionality & Ongoing Financial Need, the project is considered deemed additional and therefore not required to prove Financial Additionality at the time of Design Certification.
	This is in conformance with the requirements of the CDM PS for PAs (version 03.0) /B02/ and CDM VVS for PAs (version 03.0) /B02/ and GS4GG requirements/B01/.

D.2.2. Proof of project eligibility

Means of validation	GENERAL ELIGIBILITY CRITERIA:
	Eligible Project Types: As per section 4.1.3 of the GS4GG Principles and
	Requirements document states following for automatic eligibility for a project "A
	Project type is automatically eligible for Gold Standard Certification if there are Gold
	Standard approved Activity Requirements and/or Impact Quantification
	Methodologies associated with it or it's referenced in the Gold Standard Product
	Requirements." The Gold Standard has published Community Services Activity
	Requirements; therefore, the project activity falls under the list of Pre-identified
	eligible project and is automatically eligible for Gold standard certification. The project
	type is installation biogas plant, which is eligible under community service activity
	requirements. Therefore, the project is automatically eligible for GS certification.
	requirements. Therefore, the project to automatically englishe for the continuous

Location of the Project: The project's host Party is in the states of Chhattisgarh, India and eligible as per Gold Standard.

Project Area, Project Boundary and Scale: Project boundary geographical area is defined as the territorial boundary in various districts of the state Chhattisgarh, India. Project activity falls under small scale project activity. The installed thermal capacity of the project is 24.42 MWth which is below the threshold of small-scale projects (45 MWth). Hence, the project qualifies for small scale projects.

Host Country Requirements: The project's host Party is India and eligible as per Gold Standard requirements. The project does not have any negative environmental impact and does not require any specific licence/approval from host country, Moreover, there are no legal, environmental, ecological and social regulations /law that mandatorily enforces the implementation of the project activity. Hence, host country criteria in regards compliance with applicable Host Country's legal, environmental, ecological and social regulations is meet. The proposed project activity is deemed to be eligible under gold standard GS4GG.

Contact Details: Project contact details has been given in Appendix 1 of the PDD.

Legal Ownership: Legal ownership of the GS carbon credit generated from the project activity is transferred to Samagra Vikas Mission as verified from end user agreements /08/. Samagra Vikas Mission has signed agreement with Greneity Infocom Service Pvt Ltd to take all necessary action required for registering the project under suitable Voluntary Standard along with complete assistance during operation and maintenance of the biogas plants included in the project activity/09/.

Other Rights: Not applicable. The project is implementation as per individual users choice and hence no other rights are required.

Official Development Assistance (ODA) Declaration: The project does not involve any ODA. This has been also supported with declaration of ODA as per GS requirement /19/.

Eligibility under Gold Standard Community Services Activity (CSA) Requirements

Eligible Project Types: As per section 3.1.1 (a) of GG4GG Community Services Activity Requirements ver.1.2 document states following Renewable energy types such as solar (photovoltaic and solar thermal electricity generation), tidal/wave, wind, hydropower, geothermal, waste to energy and renewable biomass that are connected to mini grid or off grid solutions for targeted users and/or applications". The project type is installation biogas plant, which is eligible under community service activity requirements. Therefore, the project is automatically eligible for GS certification.

GENERAL ELIGIBILITY CRITERIA - Type of project:- As per section 3.1.1 (a) of GG4GG Community Services Activity Requirements ver.1.2. The project type is installation biogas plant, which is eligible under community service activity requirements. Therefore, the project is automatically eligible for GS certification.

GENERAL ELIGIBILITY CRITERIA – Project Area, Boundary and scale: Project boundary geographical area is defined as the territorial boundary of the state Chhattisgarh, India. Project activity falls under small scale project activity. The installed energy output thermal capacity of the project is 24.42 MWth which is below the threshold of small-scale projects (45 MWth) and eligible as per Gold Standard.

GENERAL ELIGIBILITY CRITERIA – Legal Ownership: Legal ownership of the GS carbon credit generated from the project activity is transferred to Samagra Vikas Mission as verified from end user agreements /08/. Samagra Vikas Mission has signed agreement with Greneity Infocom Service Pvt Ltd /09/ to take all necessary action required for registering the project under suitable Voluntary Standard along

with complete assistance during operation and maintenance of the biogas plants included in the project activity. Therefore, the proposed project activity is deemed to be eligible under gold standard GS4GG **GS4GG Gender Sensitive requirements** The project directly benefits to women and women's rights. The project directly contributes towards the national mission for empowerment of women through improvement of health and attaining vision for empowerment of women under national policy for women 2016 (Women participation will be ensured in the efficient use and spreading the use of solar energy, biogas, smokeless chulas and other technological applications to have positive influence on their life styles and a long term impact on meeting sustainable development goals). In summary, the project takes care of gender equality and women. Under section D.2 of the GS PDD /01/, PP has provided the assessment that project complies with 'gender sensitive' requirements which is found correct and deemed acceptable. The same was also verified during the onsite visit with stakeholder interview. Therefore, the proposed project activity is deemed to be eligible under gold standard GS4GG. **Findings** Conclusion CCIPL confirms that the project is eligible for GS4GG as per requirements of GS4GG.

D.3. Safeguarding Principles Assessment

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Means of validation	PP has done the safeguarding principles assessment analysis and presented assessment in the GS PDD /01/. The assessment has been performed in accordance with requirements prescribed in the GS4GG Principles & Requirements, Version 1.2 & Safeguarding Principles & Requirements, Version 1.2. The detailed assessment of safeguarding principle is provided in Appendix 5 below:
Findings	CAR 02 and CAR08 has been raised and successfully resolved. Refer Appendix 4 of this report for more details.
Conclusion	Validation team has carried out on site interviews to cross check the safeguarding principle assessment conducted by the PP. GS VVB has also reviewed the initial GS local stakeholder consultation report/16/ and GS4GG PDD /01/ and found that the PP has assessed all the required critical safeguarding principle in project activity. It has been found that the PA fulfil all the principles like Human Rights, Labor standards, environment protection, and anti-corruption. Validation assessment has been provided in the below Appendix 5.

D.4. Estimation of emission reductions or net anthropogenic removals

Means of validation	As per "AMS I.E- Switch from non-renewable biomass for thermal applications by the user, Version 13, the baseline emissions (BE_y) are calculated as:
	$BEy = By \times fNRB, y \times NCV biomass \times EF projected_fossil_fuel$
	Where,
	BEy = Baseline emissions during the year y in t CO2e By = Quantity of woody biomass that is substituted or displaced in tonnes fNRB, = Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass (fNRB)
	NCVbiomass = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne)

 $EFprojected_fossil\ fuel$ = Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 64.4 tCO2/TJ

By is determined by using option (a) paragraph 27 of the methodology as follows: "Calculated as the product of the number of households multiplied by the estimate of average annual consumption of woody biomass per household that is displaced by the project activity (tonnes/ household/year)";

 $By = NHH \times (BCBL, HH, y - BCPJ, HH, y)$

Where,

NHH = Number of households in the project activity, number

BCBL,,*y* = Average annual consumption of woody biomass per household before the start of the project activity, tonnes/household/year

BCPJ,HH,y = If it is found that pre-project devices were not completely displaced but continue to be used to some extent, average annual consumption of woody biomass per household in the pre-project devices during the project activity, tonnes/household/year

BCBL,HH,y for the project have been considered based on previous survey and publicly available reports as discussed in above section.

Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass (fNRB,y) is determined as per methodological tool 'Calculation of the fraction of non-renewable biomass' version 02 as follows:

The fraction of woody biomass that can be established as non-renewable, is: fNRB =(NRB)/(NRB+RB)

fNRB = Fraction of non-renewable biomass (fraction or %)

NRB = Quantity of non-renewable biomass (t/yr)

RB = Quantity of renewable biomass (t/yr)

Estimation of consumption of woody biomass (H/Bold,total) is done following paragraph 11 (a) of the tool 'Official Statistics'.

As per Forest Survey of India report 2021, annual wood fuel consumption in household sector for the state of Chhattisgarh=36,08,000 (Ton/year).

As per Forest Survey of India report 2011, non-domestic wood consumption (Annual fuelwood consumption in household sector and consumption of wood in House construction, Furniture and Agriculture) = 1,03,70,250 (ton/year)

Procedure to estimate RB:

Renewable biomass (RB) in the country/region/area is estimated using the equation below:

$$RB = \sum (MAI_{\textit{forest},i} \times (F_{\textit{forest},i} - P_{\textit{forest}})) + \sum (MAI_{\textit{other},i} \times (F_{\textit{other},i} - P_{\textit{other}}))$$

Where:

MAlforest,i = Mean Annual Increment of woody biomass growth per hectare in subcategory i of forest areas (t/ha/yr).

MAlother,i = Mean Annual Increment of woody biomass growth per hectare in subcategory i of other wooded land areas (t/ha/yr). This value is not considered due to non-availability of data.

Fforest,i = Extent of forest in sub-category i (ha). India state of of forest report, 2021 has been referred for this parameter.

Fother,i	= Extent of other wooded land in sub-category i (ha). This is not used
	following footnote 4 of the tool.
Pforest	= Extent of non-accessible area (e.g. protected area where extraction of
	wood is prohibited, geographically remote area) within forest areas
	(ha). This parameter is optional and not considered.
Pother	= Extent of non-accessible area (e.g. protected area where extraction of
	wood is prohibited, geographically remote area) within other wooded
	land areas (ha). This parameter is optional and not considered.
I	= Sub-category i of forest areas and other wooded land areas

The value of MAlforest,i is 0.73 for Chhattisgarh. This parameter has been referred from the Table 4.4 - Phytomass carbon pool of trees and forests in India/26/. Phytomass carbon pool of trees and forests in India report is published by Meenakshi Kaul (of Wageningen University & Research) G. M. J. Mohren (of Wageningen University & Research) and V. K. Dadhwal (of National Institute of Advanced Studies). This report is publicly available and was accepted in Gold Standard projects.

The value of Fforest,i is 6,314,000 ha. The value is referred from the India state of of forest report, 2021.

Therefore, Renewable biomass (RB) = 4,197,234.28The fraction of woody biomass that can be established as non-renewable, is: fNRB = (NRB)/(NRB+RB)

i.e. NRB = 9,781,015.72

fNRB = 70%

Project Emissions (PEy):

As per applied methodology AMS-I.E, Version 13, project emissions are accounted for below activities:

- CO2 emissions from on-site consumption of fossil fuels due to the project activity
- CO2 emissions from electricity consumption by the project activity
- Methane emission from solid waste disposal or waste water
- Project emissions related to cultivation of feedstock
- Project emissions from transportation

The project activity does not involve any of the above activity and hence, project emissions for the project activity is not applicable However, while determining By as per equation 3 of the applied methodology, firewood consumed by pre-project devices during the project activity shall be monitored and applied ex-post. This is to be accounted.

Leakage Emissions (LEy):

Leakage emissions (related to the non-renewable woody biomass saved by the project activity shall be assessed based on ex post surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples). The following potential source of leakage shall be considered: The use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources. If this leakage assessment quantifies an increase in the use of non-renewable woody biomass used by the non-project households/users that is attributable to the project activity, then By is adjusted to account for the quantified leakage. Alternatively, By is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.

	PP has opted default option, and By shall be adjusted with adjustment factor of 0.95 to account leakage. Emission reductions:		
	Emission reductions are to be estimated based on the equation below:		
	ERy = BEy – PEy – LEy		
	ERy= 32,452 tCO ₂ e/year		
Findings	CAR 09, CL01 and CL09 has been raised and successfully resolved. Refer Appendix 4 of this report for more details.		
Conclusion	Based on the calculations and results presented in the sections above the implementation of the project activity will result in an average ex-ante estimation of emission reduction conservatively calculated to be 32,452 tCO ₂ e per year. The calculation of the emission reductions has been ensured by the validation team based on the VER calculation sheet./02/.		

D.5. Monitoring plan

Means validation

of Data and parameters fixed ex-ante:

	Data/parameter	Unit	Value applied	Assessment
1	Number of households in the project activity in year y (N _{HH})	number	10,339	Validation team through reviewed of the documents and On site visit interviews. The number of biogas plants considered number of households as individual system represents individual household. The numbers are as per project database which are cross checked from sample commissioning reports /23/
2	Average annual consumption of woody biomass per household before the start of the project activity (BC _{BL,HH,y})	tonnes/ househ old/yea r	4.7	The baseline fire-wood consumption is as per third party survey report /10/ and baseline survey record and survey questionnaire /11/. Therefore, the results of survey used in this project is considered reliable.
3	Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass (f _{NRB,y})	%	70	f _{NRB} is calculated for Chhattisgarh following procedure outlined in the applied methodology and as per the latest Tool 30 version 04. Recent data referred in Forest Survey of India report 2021 has been used. The value is fixed for the entire crediting period.
4	Net calorific value of the non-renewable woody biomass that is substituted (NCV _{biomass})	TJ/tonn e	0.0156	Default value as given in the applied methodology is used for the project activity. Hence accepted /B03/.
5	Emission factor for the substitution of non-renewable woody biomass	tCO ₂ /TJ	64.4	Default value as given in the applied methodology is used for the project activity. Hence accepted /B03/.

Data and parameters to be monitored:

	Parameter	Description/Assessment
1	Average annual consumption of woody biomass per household in the pre-project devices during the project activity, if it is found that pre-project devices were not completely displaced but continue to be used to some	To be monitored at least once in every two years applying similar method like Kitchen Performance Test. Project developer shall only account only those users/households who uses firewood for cooking in baseline. Therefore, this shall be monitored among project users and accordingly accounted in
	extent. (BC _{PJ,HH,y})	emission reduction calculations. The annual consumption of woody biomass per

\neg			household in the pre-project devices during
			the project activity from the end users from
			supply point to cross check the monitored
			results. The samples to be selected from
			those households who uses fuelwood for
			cooking.
	2	Number of households (biogas	To be monitored at least once in every two
		system) in the project activity in operational per year (N _{HH})	years. Monitoring consists of checking of representative sample, to ensure that bio-
		operational per year (NAA)	digesters operating. PD will also keep
			records of water procured by end users from
			supply point to cross check the monitored
			results. The samples to be selected from
			those households who uses fuelwood for
	3	Unemployment rate, by sex, age	cooking. To be monitored annually Provided training
	3	and persons with disabilities	for improving employability. Thereby
		and persons with disabilities	improving Quality of Employment. Two
			training shall be provided in a year.
	4	Quantitative employment and	To be monitored annually Number of people
		income generation (8.5.2)	employed for the maintenance and servicing of
			biodigesters. 10 permanent employment is
	_		cross checked through HR records/13/.
	5	Access to affordable and clean	To be monitored at least once in every two
		energy services (7.1.2)	years. Number of biogas system operational
			under the project activity. The samples to be selected from those database.
	6.	Improvement in health and	
	0.	decrease in illness (3.9.1)	To be monitored at least every two years. The
		2222230	number of people with improved health and decreased illness will be tracked through
			interviews with end users. The samples will be
			chosen from those databases.

As the target population is homogeneous, PP has proposed simple random sampling plan using 90/10 as confidence/precision. This is in line with the applied methodology /B03/. The sample size for each parameter is determined following guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0 (EB86, Annex 4) /B08/.

In line with paragraph 26 of the Sampling Standard version 09, the validation team has applied acceptance sampling approach through On-site interviews on the baseline survey as part of validation. The project participant had applied sampling approach to determine the baseline, a representative baseline survey/10/ was conducted by third party. The validation team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B08/.

Applying paragraph 39 (c) of the sampling standard, version 09 /B08/, a sample size of 11 households was chosen (with no discrepant records). A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%; producer risk and consumer risk of 10 % each in determining the DOE's sample size Acceptance number (c) thus determined for the sample is 0. However, VVB interviewed 11 sample from the baseline survey done by project participants.

The information provided in the baseline survey /10/, has been cross checked during the Onsite visit. As a part of acceptance sampling, the Validation team could confirm the baseline survey data /10/ with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B08/.

Findings

Conclusion

CCIPL confirms that the monitoring plan mentioned in the PDD is in accordance with the requirements mentioned in the monitoring methodology and the local regulatory requirements, as well the monitoring arrangements described in the monitoring plan are feasible within the project design. CCIPL is of the opinion that the monitoring plan will give opportunity for real measurement of achieved emissions reductions for the crediting period.

D.6. Sustainable development co-benefits

Means	of		Parameter	Description/Assessment
validation		1.	Good health and well- being (SDG 3)	Mitigation Measure: Air Quality/ Reduction in health problems Way of monitoring: • How: Operational status of biogas pants, incidents of health problems due to indoor air quality, publicly available information may be referred. • When: Annually or biannually • Who: Third party survey. Estimated contribution: 10,339 households are expected to have reduce illness as the project activity will lead to the reduction in the level of indoor air pollution. The indicator is rightly chosen for the project activity and monitoring is in line with applied methodology and chosen indicator.
		2.	Affordable and Clean Energy (SDG 7)	Mitigation Measure: Number of households with access to clean energy. Way of monitoring: How: Survey to confirm if plants were working. When: Annually or biannually Who: Third Party survey Estimated contribution: 10,339 households are expected to have access to clean energy. The indicator is rightly chosen for the project activity and monitoring is in line with applied methodology and chosen indicator
		3.	Decent Work and Economic Growth (SDG 8)	Monitoring parameter: Employment generation from the project and quality trainings to employees Way of monitoring: PP shall keep employment records, payment records, training records as part of monitoring this parameter. Estimated contribution: 10 permanent employment is expected to generate from the project activity. The indicator is rightly chosen for the project activity and monitoring is in line with applied methodology and chosen indicator.

	Mechanism to input continuous grievances: As part of continuous grievance mechanism PP has highlighted the mechanism in stakeholder consultation report and also in the PDD. A grievance register shall be kept at panchayat office to record any grievance raised by stakeholders. Since, the project is retroactive project implementation is already, and no comments received yet. The stakeholders found aware of the grievance mechanism system. Therefore, the continuous grievance input mechanism is in place.
Findings	CAR 11 had been raised in this regard and successful resolved. Please refer appendix 4 for details.
Conclusion	CCIPL confirms that sustainability monitoring plan and indicators included in the PDD confirm to the sustainable development requirements of GS4GG.

D.7. Stakeholder Inputs & Grievance Mechanism

D.7. Glakeriolder if	iputs & Orievance mechanism
Means of validation	Discussion of continuous input /grievance mechanism As part of the grievance mechanism in place, the local stakeholders are encouraged to approach the PP through following avenues i.e. in-person, e-mail, and telephone to express their grievance, if any. Through meet agenda review and discussion with PP validation team understand that PP had discussed environmental and social aspects of project activity along with sustainability goals selected by project activity with local stakeholders. The project proponent informed the users about the input and grievance mechanism. They were informed about the maintenance of a grievance expression book which would be maintained to have a continuous account of stakeholder's feedback. Grievance Expression Process Book have been located at panchayat offices as the stakeholders' chosen places. All the sites are appropriate publicly accessible location
Findings	where local stakeholders can provide their feedback about the project. CAR 07 and CL05 have been raised in this regard and successful resolved. Please
	refer appendix 4 for details.
Conclusion	Validation team has checked the corresponding documents /17/ and found inline with the GS4GG requirements. The validation team confirms that the project activity meets the Gold Standard requirements for stakeholder feedback/ grievance mechanism.

SECTION E. Internal quality control

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The final validation report has undergone a technical review and quality review before being submitted to the project participant and Gold Standard. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM/GS validation and verification performed the technical review.

SECTION F. Validation opinion

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The VVB (Carbon Check (India) Private Ltd.) hereafter referred to as CCIPL, has been appointed by Greneity Infocom Service Private Limited (the PP) to perform validation of their PA "Smokeless Living in rural areas of India". The validation was performed on the basis of the UNFCCC criteria for the Clean Development Mechanism and GS4GG requirements. The scope of the validation is defined as an independent and objective review of the project design document (PDD) /01/, meets all applicable GS requirements, including those specified in the CDM Project Standard for PA /B02/, GS4GG Principles and requirements version 1.2 and other relevant GS4GG applicable rules /B01/, relevant methodology /B03/, tools and guidelines and article 12 of the Kyoto Protocol, paragraph 37 of CDM modalities and procedures, subsequent decisions by the COP/MOP and CDM Executive Board. The project's baseline establishment and monitoring plan and other relevant documents.

The information in these documents is reviewed against CDM Validation and Verification Standard for PA, Version 03.0 /B02/, Kyoto Protocol requirements, CDM Modalities & Procedures and subsequent decisions and guidance by the COP/MOP and CDM Executive Board and GS4GG requirements.

The report is based on the assessment of the PDD /01/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, stakeholder interviews, review of the applicable/applied methodology /B03/ and their underlying formulae and calculations.

The Validation team confirms the contractual relationship signed between the VVB, CCIPL and Greneity Infocom Service Private Limited. The team assigned to the validation meets the CCIPL internal procedures including the UNFCCC requirements for the team composition and competence. The validation team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

Validation methodology and process

The validation has been performed as per the requirements described in the Gold Standard for the Global Goals Principles & Requirements (version 1.2); and CDM VVS for PA (version 03.0) /B02/ and constitutes the review and completion of the following steps:

- Desk review of the PDD /01/, and ER spread sheet /02/
- Review of the applied monitoring methodology AMS-I.E Version 13" /B03/
- On-site interview (14/08/2023 to 16/08/2023)
- Issuance of Draft Validation Report
- Resolution of CARs and CLs raised during verification
- Issuance of Final Validation Report.

The PA will result in emissions reductions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PA is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the PA.

The validation did not reveal any information that indicates that the PA can be seen as a diversion of ODA funding /19/.

The PDD /01/ contains monitoring plan for the monitoring of the emission reductions from the PA. The monitoring arrangement described in the monitoring plan is feasible within the project design and its CCIPL's opinion that the project participants are able to implement the monitoring plan.

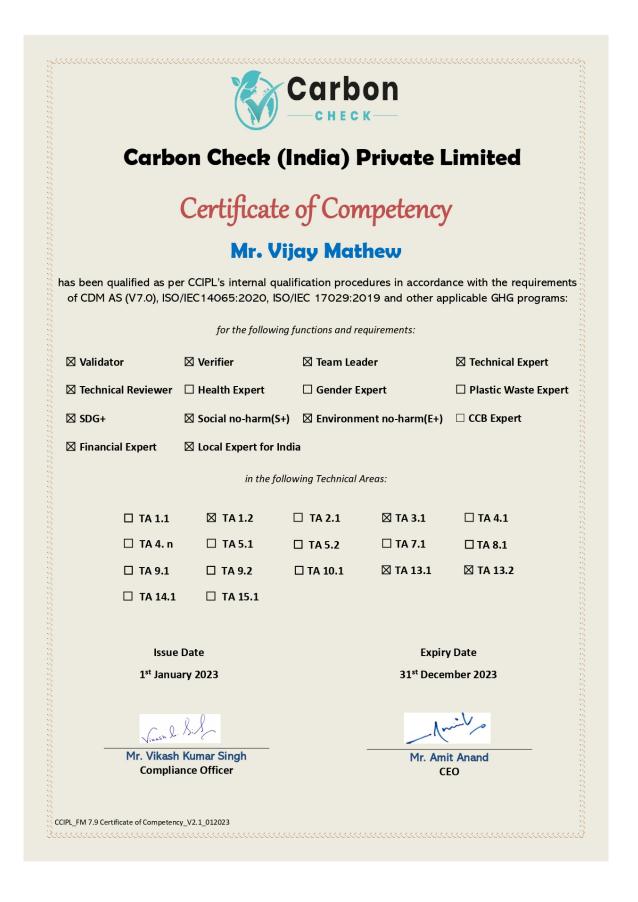
Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the GS PA "Smokeless Living in rural areas of India", as described in the PDD /01/, meets all applicable CDM/GS requirements, including those specified in the CDM Project Standard for PA /B03/, GS4GG PA requirement /B01/ relevant methodology /B02/ and article 12 of the Kyoto Protocol, paragraph 37 of the CDM modalities and procedures and the subsequent decisions by the COP/MOP and CDM Executive Board.

Carbon Check (India) Private Ltd., therefore, requests the registration of the project activity as a GS PA with Gold Standard.

Appendix 1. Abbreviations

Abbreviations	Full Texts
BE	Baseline Emission
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CER	Certified Emission Reduction
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP/MOP	Conference of Parties/ Meeting of Parties
DNA	Designated National Authority
DR	Document Review
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	
GHG	Forward Action Request
GS	Greenhouse Gas
	Gold Standard
GS4GG	Gold Standard for global goals
GWh	Giga Watt Hours
I I I I I I I I I I I I I I I I I I I	Interview
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
kWh	Kilo Watt Hours
LE _y	Leakage
LoA	Letter of Approval
LSC	Local Stakeholder Consultation
LS	Local Stakeholder
MoV	Means of Validation
MOC	Modalities of Communications
NA	Not applicable
NGO	Non-Government Organisation
ODA	Official Development Assistance
OSV	On Site Visit
PE	Project Emission
PA	Project Activity
PDD	Project Design Document
PP	Project Participant
PS	Project Standard
PCP	Project Cycle Procedure
SD	Sustainable Development
Т	Tonne
UNFCCC	United Nations Framework Convention on Climate Change
VPA	Voluntary Project Activity
VVS	Validation and Verification Standard
VVB	Validation and Verification Body

Appendix 2. Competence of team member and technical reviewers





Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements: ✓ Verifier ☑ Technical Reviewer ☐ Health Expert ☐ Gender Expert ☐ Plastic Waste Expert ⊠ SDG+ Social no-harm(S+)

■ Social no-harm(☑ Environment no-harm(E+) ☐ CCB Expert □ Local Expert for India and Sri Lanka in the following Technical Areas: ☑ TA 1.1 ☑ TA 1.2 ☐ TA 2.1 ☑ TA 3.1 ☐ TA 4.1 □ TA 4. n ☐ TA 5.1 ☐ TA 5.2 ☐ TA 7.1 ☐ TA 8.1 ☐ TA 9.1 ☐ TA 9.2 ☐ TA 10.1 ☑ TA 13.1 ☑ TA 13.2 ☐ TA 14.1 ☐ TA 15.1 **Issue Date Expiry Date** 1st January 2023 31st December 2023 Vixash L. Sist Mr. Vikash Kumar Singh Mr. Amit Anand **Compliance Officer** CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Appendix 3. Documents reviewed or referenced

S.	Document	
No.		
/01/	GS PDD for the project activity	
	a. "Smokeless Living in rural areas of India" dated 10/05/2022	
	b. "Smokeless Living in rural areas of India " dated 24/08/2023	
	c. "Smokeless Living in rural areas of India " dated 04/09/2023	
	d. Smokeless Living in rural areas of India " dated 09/09/2023	
/02/	Emission reduction calculation spread sheet correspond to /01-a/	
	Emission reduction calculation spread sheet correspond to /01-d/	
/03/	Technical specification of the biogas Deenbandhu model	
/04/	GS11656_GS4GG _Preliminary Review	
/05/	Project activity data base	
/06/	Evidence for the start date of the project activity	
/07/	Company registration certificate from the PP	
/08/	Proof of right of relinquishment of VERs from the end users of the biogas plant	
/09/	Tri-party agreement between Greneity Infocom Service Pvt Ltd, Samagra Vikas Mission and end	
/4.0./	user for funding and right transfer.	
/10/	Baseline survey report conducted by Klimate Shield Pvt Ltd Dated: 30/4/2022	
/11/	Baseline Sample survey records and survey questionnaires	
/12/	Project database	
/13/	HR employment records (contractual and permanent)	
/14/ /15/	Training Records of project staff at site Local stakeholders Consultation:	
/15/	,	
	Minutes of local stake holder consultation process	
	Invitation to stakeholders	
	Email Invitation to stakeholders	
	Attendance sheet of LSC	
	LSC evaluation forms	
	Photos	
	Non-technical description	
/16/	Stakeholder Consultation Report	
/17/	Procedure for Grievance Mechanism	
/18/	Monitoring survey scanned forms and survey data sheet	
/19/	Declaration for non-receiving of ODA for project	
/20/	Declaration from the project proponent that the project is not creating any other form of	
	environmental credit under any specific program.	
/21/	Declaration from the project proponent that the project has not or shall not claim carbon credits any	
	other scheme after Registration of the project under GS.	
/22/	Declaration on double counting, target group and distribution mechanism.	
/23/	Commissioning Certificate by Samagra Vikas Mission	
/24/	Evidence for unique identification of the digester.	
/25/	Purchase order issued to the bio gas stove supplier dated 10/06/2022	
/26/	Published Paper: Phytomass carbon pool of trees and forests in India	
	https://www.researchgate.net/publication/226083798_Phytomass_carbon_pool_of_trees_and_fore	
	sts_in_India	

Background documents

S. No.	Document	
/B01/	 GS4GG Principles & requirements version 1.2 GS4GG Safeguarding principles & requirements version 1.2 GS4GG Stakeholder-Consultation requirements version 1.2 GS4GG Gender-Equality-Requirements-Guidelines version 1.1 GS4GG Community Services Activity Requirements (version 1.2) 	
/B02/	Gold standard validation and verification standard version 1	
/B03/	 Applied baseline and monitoring methodologies and Tools AMS-I.E. Switch from non-renewable biomass for thermal applications by the user - Version 13 Tool 30: Calculation of the fraction of non-renewable biomass, version 03. 	
/B04/	Site Visit And Remote Audit Requirements And Procedures version 1 dated 17/11/2021	
/B05/	GS4GG Project of Activity requirements version 1.2	
/B06/	GHG Emissions Reduction & Sequestration Product Requirements, version 2.1 dated 24/02/2022	
/B07/	 Template Key Project Information & Project Design Document (PDD), version 1.2 dated 14/10/2020 TEMPLATE GUIDE Key Project Information & Project Design Document v.1.2 	
/B08/	 "Standard for sampling and surveys for CDM project activities and programme of activities" (version 09.0) Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04) 	

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1.CARs from this validation

 CAR ID
 01
 Section no.
 PDD
 Date: 23/08/2023

Description of CAR

During the preliminary review of the project, FAR#1 was raised by GS as follows:

PD shall provide evidence for start date as the project is retroactive.

PP response Date: 24/08/2023

PP has submitted Purchase order for biogas challahs dated 10/6/2022 placed by PP, as the evidence for the start date.

Documentation provided by PP

Purchase Order

VVB assessment Date: 25/08/2023

PP has provided the evidence of start date. VVB has reviewed the purchase order and found inline. Hence CAR 01 is closed.

CAR ID 02 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

During the preliminary review of the project, FAR#2 was raised by GS as follows:

All the safeguarding principles assessment shall be supported with evidence/references/expert's opinion. The PP shall provide them to VVB at the time of validation.

PP response Date: 24/08/2023

The revised PDD now covers all the safeguarding principles assessment with evidence/references/expert's opinion

Documentation provided by PP

Revised PDD

VVB assessment Date: 25/08/2023

PP has revised the PDD and the revisions found inline. Hence CAR 02 is closed.

CAR ID 03 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

During the preliminary review of the of the project, FAR#3 was raised by GS as follows:

PD shall upload a signed "Terms of Use" document on SC app at the time of validation. VVB to check.

PP response Date: 24/08/2023

PP has uploaded signed "Terms of Use" document on SC app

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has provided the signed "Terms of Use" document in the SC app and found appropriate. Hence CAR 03 is closed.

 CAR ID
 04
 Section no.
 PDD
 Date: 23/08/2023

Description of CAR

Based on the preliminary review of the project, performed by GS; PP is requested to justify/provide evidence for the following points;

1) Evidence of the start date

- 2) The evidence of carbon rights system in place; further PP is requested to demonstrate how stakeholders are aware of the rights and the transfer process.
- 3) PP is requested to provide the details of the Stakeholders Feedback Round process and the comment received
- 4) PP is requested to provide the evidence for date of listing at Sustaincert portal
- 5) PP is requested to provide the details/evidence related to all attendees of LSC meeting were invited further for feedback/comment during SFR.
- 6) PP is requested to provide the details/evidence of all the SDGs claimed.

PP response Date: 24/08/2023

PP has submitted the following documents as an Annexures to this DVR:

- 1) Purchase order dated 10/6/2022
- 2) Commissioning certificates signed by the end users clearly states about carbon rights transfer to the PP in the lieu of free operation and maintenance. Same was discussed with the stakeholders present during the meetings and same has also been mentioned in the evaluation forms, filled by the stakeholders.
- 3) Email invitations were sent to all the global NGO supporters (screenshots shared as annexures to the DVR) and minimum 60 days' time period was given to submit the feedback to the PP. Till date no feedback has been received.
- 4) Screenshot of the portal has been shared as an Annexure to the DVR
- 5) It was discussed during the local stakeholder's meeting and project documents were made available in the local language in the nearby Panchayat offices to give feedback on the project documents.
- 6) PDD has been revised and all the supporting documents has been attached as an Annexures to the DVR.

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has provided the documents and found appropriate. Hence CAR 04 is closed.

CAR ID 05 | **Section no.** | PDD | **Date**: 23/08/2023

Description of CAR

"Demonstrate the activity is NOT located in a host country, region, locality or state that has an emission reduction cap enforced OR has the possibility to trade emissions that include the scope of the proposed project".

PP response Date: 24/08/2023

Project Owner has voluntarily implemented the project activity and there is no legal, environmental, ecological and social regulations /law that mandatorily enforces the implementation of the project activity or there are no other law/regulations that prevents the project owner to set up the project activity. Hence, project activity is in compliance with applicable Host Country's legal, environmental, ecological and social regulations.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by PP found acceptable. Hence CAR 05 is closed.

CAR ID 06 | **Section no.** | PDD | **Date**: 23/08/2023

Description of CAR

PP is requested to demonstrate that the project is in compliance with applicable Host Country's legal, environmental, ecological and social regulations.

PP response Date: 24/08/2023

Project Owner has voluntarily implemented the project activity and there is no legal, environmental, ecological and social regulations /law that mandatorily enforces the implementation of the project activity or there are no other law/regulations that prevents the project owner to set up the project activity. Hence, project activity is in compliance with applicable Host Country's legal, environmental,

ecological and social regulations.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by PP found acceptable. Hence CAR 06 is closed.

CAR ID 07 **Section no.** | PDD **Date**: 23/08/2023

Description of CAR

PP is requested to provide continuous grievance mechanism in PDD.

PP response Date: 24/08/2023

PDD has now been revised

Documentation provided by PP

PDD

VVB assessment Date: 25/08/2023

PP has now revised the PDD and now incorporated the continuous grievance mechanism in the PDD. Hence, CAR 07 is closed.

CAR ID 08 **Section no.** | PDD | **Date:** 23/08/2023

Description of CAR

PP is requested to provide evidence/references/expert's opinion related to all the safeguarding principles.

PP response Date: 24/08/2023

PDD has now been revised with all evidence/references/expert's opinion related to all the safeguarding principles.

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has now revised the PDD and the revisions found appropriate. Hence, CAR 08 is closed.

CAR ID 09 **Section no.** | PDD | **Date**: 23/08/2023

Description of CAR

:PP to provide the exact reference to the values used in the determination of fNRB, also noting that the values are inconsistent and incorrectly presented across the PDD. Further, the most recent available dataset is to be used for the determination of fNRB.

PP response Date: 24/08/2023

Value for all the required parameters have been applied from latest report of Forest Survey of India,2021. However, Parameter- Non-domestic wood consumption (Annual fuelwood consumption in household sector and consumption of wood in House construction, Furniture and Agriculture) is available latest in 2011 report and hence FSI,2011 report is used. Since, these were the latest data publicly available from authenticated govt sources during time of Project development.

Moreover, TOOL30 version 04 – "Calculation of the fraction of non-renewable biomass" -allows usage of different vintage parameters, however, the vintage of the data for certain parameters shall not be before year 2000. Therefore, fNRB calculated was in accordance PP.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by the PP found acceptable. Hence, CAR 09 is closed.

CAR ID 10 **Section no.** PDD **Date:** 23/08/2023

Description of CAR

In section A.1.1, PP needs to provide contact details of the PP Samagra Vikas Mission along with legal registration details and documentation by the governing jurisdiction that proves that the entity owns the ownership of the credits gain by this project.

PP response Date: 24/08/2023

Samagra Vikas Mission is not the Project representative and hence not applicable. However, registration details for Greneity Infocom Service Pvt Ltd is submitted.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by the PP found acceptable. Hence, CAR 09 is closed.

 CAR ID
 11
 Section no.
 PDD
 Date: 23/08/2023

Description of CAR

Please provide the target name for SDG 3,7,8,and 13 as per Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development. Please correct the same in B.6 as well and please provide details in both sections inline. Further, In section B.6, most relevant SDG target corresponding to SDG 8 is indicated as SDG target 8.5.2. However as per the SDG impact sheet, the same is indicated as 8.5. PP needs to justify regarding this discrepancy.

PP response Date: 24/08/2023

PDD along with SDG tool has now been revised and same has been submitted

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has now revised the PDD and the revisions found appropriate. Hence, CAR 11 is closed.

Table 2.CLs from this validation

CL ID 01 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

During the preliminary review of the of the project, CL 01 was raised by GS as follows:

PD shall submit the fNRB report and demonstrate that it was calculated following the latest version of fNRB tool using the most recent available data.

PP response Date: 24/08/2023

Value for all the required parameters have been applied from latest report of

Forest Survey of India,2021. However, Parameter- Non-domestic wood consumption (Annual fuelwood consumption in household sector and consumption of wood in House construction, Furniture and Agriculture) is available latest in 2011 report and hence FSI,2011 report is used. Since, these were the latest data publicly available from authenticated govt sources during time of Project development. Moreover, TOOL30 version 04 – "Calculation of the fraction of non-renewable biomass" -allows usage of different vintage parameters, however, the vintage of the data for certain parameters shall not be before year 2000. Therefore, fNRB calculated was in accordance PP.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by the PP found acceptable. Hence, CL 01 is closed.

CL ID 02 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

During the preliminary review of the of the project, CL 02 was raised by GS as follows:

PD shall submit the baseline survey result and demonstrate how the baseline survey was conducted with representative samples for the project boundary.

PP response Date: 24/08/2023

Baseline survey results is submitted as an Annexure to the DVR. As per Sampling guidelines, random sampling has been chosen since population is homogenous in nature. As per sampling guidelines 90/10, PP has chosen 300 samples on conservative note rather than minimum sample size required.

Documentation provided by PP

PDD

VVB assessment Date: 25/08/2023

PP has submitted the baseline survey and found appropriate. Further PDD has revised. The justification and supportive documents found acceptable. Hence, CL 02 is closed.

CL ID 03 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

During the preliminary review of the of the project, CL 03 was raised by GS as follows:

PD to explain how the start date for crediting period was selected.

PP response Date: 24/08/2023

As per the GS4GG clause 3.4.3 (principle and requirement) states 'the Project start date shall be the earliest date on which the Project Developer has committed to expenditures related to the implementation of the Project'. In this case the start date is the earliest date of purchase order placed for the biogas chullahs from the supplier i.e. 10/6/2022. However, date of 1st biogas plant commissioning was on 25/6/2022 and therefore, same has been taken as the start date of the crediting period.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by the PP found acceptable. Hence, CL 03 is closed.

 CL ID
 04
 Section no.
 PDD
 Date: 23/08/2023

Description of CAR

During the preliminary review of the of the project, CL 03 was raised by GS as follows:

Please provide more details on the location of the project activity in GS-PDD.

PP response Date: 24/08/2023

Revised PDD has detailed project locations.

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has now revised the PDD and the revisions found appropriate. Hence, CL 04 is closed.

CL ID 05 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

Please clarify the stakeholder meeting date, to confirm whether it was conducted before the start date of the project activity or after the start date.

PP response Date: 24/08/2023

Stakeholder meeting was conducted on 21/05/2023, i.e. after the project start date. Since project is retroactive, hence meeting was conducted after the start date of the project activity.

Documentation provided by PP

VVB assessment Date: 25/08/2023

The justification provided by the PP found acceptable. Hence, CL 05 is closed.

CL ID 06 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

In section B.6.4, total net benefit is calculated incorrectly. PP needs to clarify regarding this discrepancy.

PP response Date: 24/08/2023

Pp has corrected the same in the revised PDD

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has provided the revised PDD, which has been verified by the validation team. Hence this CL is closed.

 CL ID
 07
 Section no.
 PDD
 Date: 23/08/2023

Description of CAR

PP is requested to provided the following documents;

- 1 . Commisioning details
- Project Sales database'
- 3. Purchase order date
- 4. Baseline survey results
- 5. Monitoring plan
- 6. SCR report
- 7. Proof of email invitations

PP response Date: 24/08/2023

All the supporting documents have been submitted as an Annexures to the DVR

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has provided all the mentioned supportive documents and found appropriate. Hence, CL 07 is closed.

CL ID 08 **Section no.** | PDD | **Date**: 23/08/2023

Description of CAR

Time of First submission is not mentioned in KPI; Kindly provide the justification for prior consideration of carbon revenues.

PP response Date: 24/08/2023

Time of First submission is mentioned in the Revised PDD and also includes chronology of events considering carbon revenues.

Documentation provided by PP

VVB assessment Date: 25/08/2023

PP has provided the revised PDD, which has been verified by the validation team. Hence this CL is closed.

CL ID 09 **Section no.** PDD **Date**: 23/08/2023

Description of CAR

As per the methodology AMS I.E version 13 related to the calculation of fNRB, it refers to the latest version of tool 30 i.e. version 04. PP is requested to clarify how it has meet all the requirements of para 6 of the tool 30 version 04

PP response Date: 24/08/2023

Value for all the required parameters have been applied from latest report of

Forest Survey of India,2021. However, Parameter- Non-domestic wood consumption (Annual fuelwood consumption in household sector and consumption of wood in House construction, Furniture and Agriculture) is available latest in 2011 report and hence FSI,2011 report is used. Since, these were the latest data publicly available from authenticated govt sources during time of Project development. Moreover, TOOL30 version 04 – "Calculation of the fraction of non-renewable biomass" -allows usage of different vintage parameters, however, the vintage of the data for certain parameters shall not be before year 2000.

Calculated value of fNRB as per the required data is 70%.

Reason for choosing the Forest Survey of India reports is as follows:

- Forest Survey of India is government authorized agency which conducts survey at regular intervals
- Adequate sample size is chosen and results are derived from Primary data rather than satellite based
- Provides data for each state in the country.
- Results are more state specific rather than general
- Latest data is available for each year for most of the parameters.

Hence value obtained i.e. 70% is justified. Therefore, fNRB calculated is in accordance to the para 6 of the tool 30 version 04

of the tool 30 version 04	·
Documentation provided by PP	
VVB assessment	Date: 25/08/2023
The justification provided by the PP found acceptable. Hence,	, CL 09 is closed.

1. FARs from this validation

FAR ID	XX	Section no.	Date:					
Description	Description of FAR							
PP respons	se		Date:					
Documenta	ation provid	led by PP						
VVB assess	sment		Date:					

Appendix 5: SAFEGUARDING PRINCIPLES & REQUIREMENTS

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)	VVB Assessment
Principle 1. Human Righ	ts			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights 2. The Project shall not discriminate with regards to participation and inclusion	No	1.The Project is not in conflict with the economic livelihood or other issue of the local community. Thus, the Project does not cause any human rights abuse and respects internationally proclaimed human rights issue. 2.Project activities are not expected to cause any human rights abuse. As a member of United Nations and part of UN Agreement on Human Rights, it is ensured by law in India that no action can be taken against human rights.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 2. Gender Equ	ality			
The Project shall not directly or	No	1. The project is implemented at	Not required	The project directly benefits to women and

- indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women
- 2. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work
- 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks
- (where required)
 Summary of opinions and recommendations of an Expert Stakeholder(s)

households. It does not involve any women workforce which may lead to sexual harassment.

The project does not restrict of women's rights or access to resources. The project recognizes women's ownership rights regardless of marital status.

2. Yes. The project involves construction of biogas digesters households. at Trained labors are used for the same. Local people are engaged for the No same. discrimination either in gender or any other form is followed to engage local people. 3. India ratified the International Convention the Elimination of ΑII Forms Racial Discrimination on 03/12/1968 with certain reservation. The project activity is line with in strategy of

women's The rights. directly project contributes towards the national mission for empowerment of women through improvement of health and attaining vision for empowerment of women under national policy for women 2016 (Women participation will be ensured in the efficient use and spreading the use of solar energy, biogas, smokeless chulas and other technological applications to have positive influence on their life styles and a long term impact on meeting sustainable development goals).In summary, the project takes care of gender equality and women rights.

		elimination of discrimination. 4. Summary of opinions and recommendations of an Expert Stakeholder is required in case of Gender responsive project activity which is not the case for the project activity.		
Principle 3. Community	Health, Safety and Wo	rking Conditions		
1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	No	The project leads to safe working condition and improvement in health as it will replace firewood as fuel with biogas which is clean and safe. All the participants/staffs are well trained and are well aware of the in operational and maintenance issues as well as health & safety related topics.	Not required	The project biogas system does not involve any hazardous material during construction and its operation. With the biogas system, users have access to cleaner fuel compared to firewood. In addition, firewood based cooking system has high indoor air pollution and a risk to fire-hazard. In comparison to that, biogas is clean smokeless fuel, and due to its maintained pressure, there is no risk of any fire hazard or accident from the project activity. Hence, the project only leads to safe working conditions and improved in health of end users. The parameter 'Improvement in health and decrease in illnesses' under this principle shall be

				monitored by PP at least once in two years.
Principle 4.1 Sites of Cu	Itural and Historical H	leritage		
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	The project area covers households which does not have any structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture. No cultural heritage/indigenous people are replaced by the project. Hence, not applicable.	Not required	The project is implemented in existing households where the fire-wood usage is replaced with biogas as fuel. This does not involve any damage to cultural heritage or displacement and resettlement and rights of indigenous people. The project activity takes place in households. Hence, this parameter is safeguarded by the project activity.
Principle 4.2 Forced Evid	tion and Displacemer	nt		
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project activity takes place within individual households. Therefore, no relocation of people takes place.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 4.3 Land Tenu	re and Other Rights			
Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership? For Projects involving land use tenure, are there any uncertainties with regards to land	No	There are no uncertainties regarding land tenure, access rights, usage rights or land ownership. The biogas digesters are developed for the users and will	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the onsite visit audit to confirm the same.

tenure, access rights, usage rights or land ownership?		belongs to them. They will have the all the rights to use and maintain the same.		
Principle 4.4 - Indigenou	s people			
Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	No. The project involves household biogas digesters in the state of Chhattisgarh, India. Therefore, it does not involve any negative influence towards indigenous people	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 5. Corruption				
1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects 1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	No	Project activity is an installation of biogas digesters at households in the state of Chhattisgarh, India and does not contribute to or reinforce corruption of any kind. Indulgence in corruption is an illegal activity in the host country and the local labor compliance takes into account of the same. PP does not involve and is not complicit in any kind of corruption. India has ratified UN convention against Corruption in 2011.	Not required	The project involves installation of household biogas plants in rural households which does not require any specific permit or approval from any authority. The end users as owner of biogas system is taking part in the project activity with agreement to project developer to share benefits from the project to be developed as GS project. Once, commissioned the system runs successfully upto its lifetime with proper maintenance. Greneity has agreed for regular operation and maintenance of each project biogas system as confirmed during onsite visit and interview with end users. Therefore, the project does not have any scope for corruption

					or corrupt practice. The principle is safeguarded by the project activity.
Prin	ciple 6.1 Labour Rig	ihts			
	The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions Workers shall be able to establish and join labour organisations Working agreements with all individual workers shall be documented and include: a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND d) Modalities on health insurance, AND e) Modalities on termination of the contract	No	1.The project proponent is committed to the employee's workplace health & safety during all phases of the project. All employees will attend health & safety trainings. This is issued in the Labour code on Occupational Safety, Health and Working Conditions and UN Agreement on Human Rights. 2.The project respects fundamental right of employee. There is law in India since 1926 by The Trade Unions Act, 1926 which protects rights of industrial trade unions and their members. PP and appointed contractors will not involve in any form of forced or compulsory labor. India has ratified ILO "C029 — Forced Labor Convention". 3.PP and their subcontractors complying with all relevant national	Not required	Labour rights & negative economic consequences: The project is not labour intensive as it doesn't involve major construction works, employing labours is not within the scope of the project. Trained RETs with the help of trained technical staff construct biogas system and once commissioned, only periodic maintenance is needed which is done by trained technical personnel. Therefore, there is no forced labour or child labour involved in the project activity. India (host country) has set of rules and acts in place for the protection of labour and employee. Therefore, the safeguarding principle under discussion will not have negative impact.

with provision for voluntary resignation by employee, AND 1) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 1) No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion) 2) The Project Developer shall ensure the use of appropriate equipment, training of accidents and incidents, and emergency preparedness and response measures with provision for voluntary critical and response measures Iaws regarding child abor for their works. India has ratified ILO (Convention' 1.4. PP and their children working on their families' property requires relevant national and reporting of child labor. PP will not employ child labor. PP will not employ children in any shape or form for their works. India has ratified ILO (Convention' 2.4. PP and their children in any shape or form for their works. India has ratified ILO (Convention' 2.5. The project children in any shape or form for their works. India has ratified ILO (Convention' 2.5. The project owner is committed to the safe and healthy working conditions all phases of the project. All employees will attend trainings health & safety. This issue is protected by Labor code and UN Agreement on Human Rights.			
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Principle 6.2 Negative Economic Consequences		Human Rights .	
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	Principle 6.2 Negative Economi	c Consequences	

economic consequences during and after project implementation? Principle 7.1 Emissions Will the Project increase greenhouse gas emissions over the Baseline Scenario? Principle 7.2 Energy Supply Will the Project use do not seed to a validation team beyond the project continuous maintenance. Thus, there is no negative economic consequences during and after project implementation. Principle 7.1 Emissions Will the Project increase greenhouse gas emissions over the Baseline Scenario? Principle 7.2 Energy Supply Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? Will a greenhouse gas emissions over the biogas. Hence, it will reduce greenhouse gas emissions over the Baseline Scenario. No. The project required implementation on household biogas system replaces fire wood which leads to overall emission reductions. The energy supply is not hampered cattle dung only. Cow dung and other household validation team further project on the sectoral expertise of validation team further interviewed during the constitution to operate 100% project systems with continuous maintenance. Thus, there is no negative economic required implementation on household biogas system required implementation on household biogas system required on household biogas system required on household biogas system required on the project expertise of voerall emission reductions. The energy supply is not hampered cattle dung only. Cow dung and other household validation team further project employee and stakeholders were interviewed during the provides of or the digesters. There		_	T	T	
Will the Project increase greenhouse gas emissions over the Baseline Scenario? Principle 7.2 Energy Supply Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? No. The project will replace firewood use with biogas. Hence, it will reduce greenhouse gas emissions over the Baseline Scenario. No. The project wood which leads to overall emission reductions. The energy supply is not hampered compared to baseline. No. The project uses inhouse cattle dung only. Cow dung and other household waste shall be used as a feed source for the digesters. There is no use of Wood or Biomass in the project activity.	cause negative economic consequences during and after project	No	lifetime of 20 years and expected to run beyond the project certification period. With carbon finance it is further strengthen to operate 100% project systems with continuous maintenance. Thus, there is no negative economic consequences during and after project		provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/ employee and stakeholders were interviewed during the onsite visit audit to
greenhouse gas emissions over the Baseline Scenario? Will replace firewood use with biogas. Hence, it will reduce greenhouse gas emissions over the Baseline Scenario. Principle 7.2 Energy Supply Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? Will the Project use energy from a local grid or power supply (i.e., not connected to a national other household waste shall be used as a feed source for the digesters. There is no use of Wood or Biomass in the project activity.	Principle 7.1 Emission	s			
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Principle 8.1 Impact on Natural Water Patterns/Flows	energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides	No	uses inhouse cattle dung only. Cow dung and other household waste shall be used as a feed source for the digesters. There is no use of Wood or Biomass in the		provided by PP was foundadequate based on the sectoral expertiseof validation team. Further PP representative/employee and stakeholders were interviewed during the onsite visit audit to
	Principle 8.1 Impact on	Natural Water Patterns	s/Flows		

Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The project activity is installation of biogas digesters for energy generation to meet domestic requirements. Individual household-based biogas digesters are planned to be installed which are small in size and will not have any impact on the natural or preexisting patter of water courses.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 8.2 Erosion an	d/or Water Body Insta			
Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	No. The risk of erosion is unlikely by the project.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.1 Landscape	e Modification and So	il		
Does the Project involve the use of land and soil for production of crops or other products?	No	The project will not involve use of land and soil for production of crops or other products.		The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.2 Vulnerabilit	y to Natural Disaster			

<u></u>				
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	No. The project happens at individual households. There is no activity which can affect adversely the natural system to cause earthquake, landslides, erosion, flooding, draught or other extreme climatic conditions.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.3 Genetic Res	sources			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	No	Not applicable. The project does not involve any crop production or cultivation.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.4 Release of	pollutants	<u> </u>	<u> </u>	
Could the Project potentially result in the release of pollutants to the environment?	No	The project activity is installation of biogas digesters for energy generation to meet domestic requirements. The project would lead to improving of indoor air pollution that occurs due to use of wood based chula's or cookstoves in the	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.

Principle 9.5 Hazardous	s and Non-hazardous	baseline. However, Bio Slurry is managed in appropriate manner as a manure. Beneficiaries using bio slurry on their land to improve soils fertility.		
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The project activity is installation of biogas digesters for energy generation to meet domestic requirements. There are no hazardous waste generated due to the project. The slurry generated as part of the biodigester shall be used as fertilizer.	Not required	The project involves use of household biogas systems which does not involve any landscape modification or leads to vulnerable natural disasters. It also does not involve any manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials. It leads to negligible pollution (air pollution due to firing of firewood) compared to baseline scenario as the project technology replaces firewood consumption compared to baseline scenario. Hence, the principle is safeguarded by the project activity.
Principle 9.6 Pesticides	& Fertilisers			
Will the Project involve the application of pesticides and/or fertilisers?	No	The project activity is installation of biogas digesters for energy generation to meet domestic requirements. There are no hazardous waste	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the

		generated due to the project. The slurry generated as part of the biodigester shall be used as fertilizer.		onsite visit audit to confirm the same.
Principle 9.7 Harvesting				
Will the Project involve the harvesting of forests?	No	Not applicable. The project happens at individual households.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.8 Food	1		l	
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	Not applicable. The project activity is biogas digester installation happens at individual households.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.9 Animal hus				
Will the Project involve animal husbandry?	No	Not applicable. The project activity is biogas digester installation happens at individual households.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.

Principle 9.10 High Cons				
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	Not applicable. The project activity is biogas digester installation happens at individual households.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.
Principle 9.11 Endanger	ed Species			
a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	No	Not applicable. The project activity is biogas digester installation happens at individual households.	Not required	The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative /employee and stakeholders were interviewed during the onsite visit audit to confirm the same.