



**Verification and certification report form for
Gold Standard project activities**

BASIC INFORMATION

Title and GS reference number of the project activity	Smokeless living in rural areas in India (GS 11988)
Scale of the project activity	<input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale
Version number of the verification and certification report	03
Completion date of the verification and certification report	08/10/2024
Monitoring period number and duration of this monitoring period	02 11/08/2023 – 31/07/2024 (inclusive of both days)
Version number of the monitoring report to which this report applies	Version 03 dated 30/09/2024
Crediting period of the project activity corresponding to this monitoring period	10/06/2022 to 09/06/2027
Project representative(s)	Greneity Infocom Service Private Limited
Host Party	India
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
Conditional sectoral scopes, if applicable	13
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	38,341 tCO ₂ e
Certified amount of GHG emission reductions or GHG removals for this monitoring period	35,354 tCO ₂ e
SDG Impacts:	1. SDG 3: Good health and wellbeing 2. SDG 7: Affordable and Clean Energy 3. SDG 8: Decent work and Economic Growth 4. SDG 13: Climate Action
Name and UNFCCC reference number of the VVB	E-0052: Carbon Check (India) Private Ltd.

Name, position and signature of the approver of the verification and certification report

Priya Suman

Priya Suman, Compliance Officer

SECTION A. Executive summary

Carbon Check (India) Private Ltd. (CC IPL) is performing the second periodic verification of the GS project "Smokeless living in rural areas in India" (GS project id: GS 11988) for the period 11/08/2023 – 31/07/2024 (inclusive of both the dates). The project activity involves bundling of 10,339 household biogas plants in the state of Chhattisgarh, India, with capacities ranging from 2m³ to 3m³. All 10,339 plants are commissioned in between June, 2022 till November, 2022.

According to the PDD /B03/ & MR /01/, the project activity " Smokeless living in rural areas in India" aims to improve health and income of India by reducing time and money spent acquiring fuel for cooking and by providing local populations with improved access to clean water. The objective of this project activity is to replace the commonly used inefficient wood-fired mud stove technology with an efficient biogas-based cook stove that is both clean and sustainable.

This report summarises the findings of the verification of the project, performed on the basis of Gold standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the Gold Standard. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with request for issuance of VERs. This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions.

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Validation & verification body (VVB), of the monitored reductions in GHG emissions that have occurred as a result of the project activity during a defined monitoring period.

Certification is the written assurance by a validation & verification body (VVB) that, during a specific period, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the "Smokeless living in rural areas in India" in the host country "India" for the period 11/08/2023 – 31/07/2024 (including both the days).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. CC IPL's objective is to perform a thorough, independent assessment of the registered project activity.

In particular, the monitoring plan, monitoring report and the project's compliance with relevant GS and Host Party criteria are verified in order to confirm that the component project/s has/have been implemented in accordance with the previously registered project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered PDD and the approved monitoring methodology.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered PDD
- To verify the implemented monitoring plan with the registered PDD and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

Verification process:

The verification comprises a review of the monitoring report /01/ over the monitoring period from 11/08/2023 – 31/07/2024 (inclusive) and based on the registered PDD as part of the monitoring parameters and monitoring plan, emission reduction calculation spreadsheet, monitoring methodology, and all related evidence provided by project participants.

On-site interviews and inspections are also performed as part of the verification process.

Conclusion:

The verification team assigned by the validation & verification body (VVB) concludes that the monitoring report /01/, meet all relevant requirements of the Gold Standard as per the requirements of GS4GG. The verification has been conducted in-line with the GS4GG requirements.

The project activity was correctly implemented according to the selected monitoring methodology, monitoring plan and the registered PDD /B04/. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. The following table provides the resulted emission reduction from the project as verified through the document review and on-site interviews by the verification team.

Vintage	ER (tCO₂e)
11/08/2023– 31/12/2023	14,184
01/01/2024– 31/07/2024	21,169
Total for the monitoring period	35,353 tCO₂e

CC IPL as a Validation & verification body (VVB) is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader / Local expert	IR	Gedam	Pallavi	CC IPL	X	X	X	X
2.	Technical Expert/ Local Expert	IR	Agarwalla	Sanjay Kumar	CC IPL	X	-	X	X

B.2. Technical reviewer and approver of the verification and certification report

No	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	C	Indumathi	CC IPL
2.	Approver	IR	Suman	Priya	CC IPL

Pallavi Gedam: She is qualified as Team Leader in TA 1.2 and 3.1 and involved in various validations and verifications under CDM, VCS and Gold Standard (GS) projects. She has also attended Several Gold Standard DOE webinar trainings including training on GS4GG. She holds a Bachelor of Science degree in Chemistry and Master of Science degree in Environmental Science from University of Mumbai. She also a qualified Lead Auditor in ISO 14001:2015 Environmental Management System. She has been involved in number of GS validation and verification projects (as trainee Assessor) GS10898 PoA (GS 10899 to GS 10921) VPA 001 to VPA 023, GS7776 PoA (GS 10716 (VPA 01), GS 916 PoA , GS5417 (VPA 12) GS 5418 (VPA 13).

Sanjay Kumar Agarwalla: He is an appointed Team Leader and Technical Expert for technical area 1.1, 1.2, 2.1, 3.1, 4.1, 5.1, 5.2, 8.1, 9.1, 9.2 and 13.1. He is having more than 17 years of experience, which involves more than 10 years of industrial experience and almost seven years in climate change. He worked in various capacities at Kesoram Rayon, Durgapur Chemicals Limited, Gensol Consultants, TUV Rheinland India Pvt Ltd and LRQA. He is involved in more than 70 GHG audits including validation/verification/post registration changes. He also has GS Audit Experience and attended the Gold Standard webinar. The GS projects on which he has worked are 1309, 850, 6191, 411, 1353 and 939.

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).

SECTION C. Means of verification

C.1. Desk/document review

The verification was performed primarily based on the review of the Monitoring report /01/ and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

Physical on-site inspection has been performed and the Team leader (who is also the technical and host country expert) has conducted the on-site inspection.

Furthermore, VVB has considered the Site Visit and Remote Audit Requirements and Procedures, version 2.0/B06/ for conducting the onsite visit. In accordance with the requirements provided in the §3.1.1(b) of the Site Visit and Remote Audit Requirements and Procedures, version 2.0/B06/.

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
/01/	Garg	Shivani	Greneity Infocom Services	17/08/2024-18/08/2024	Project Design Organisation background Project Implementation plan Project start date and Project Location Project background information Baseline surveys, KPT, FNRB calculation Baseline Scenario Baseline Identification and Additionality Monitoring and reporting documentation Qualification and Training Quality Assurance-Management and operating system Social and Environmental Impacts Local Stakeholders meeting process Compliance with relevant laws Roles and responsibility Observations of established practices	Pallavi Gedam
/02/	Sharma	Kavita	Greneity Infocom Services	17/08/2024-18/08/2024	Project Implementation and operation. Grievance handling. Maintenance	Pallavi Gedam
/03/	Sharma	Arjun	Greneity Infocom Services	17/08/2024-18/08/2024	Project Implementation and operation.	Pallavi Gedam

					Grievance handling. Maintenance Monitoring plan	
/04/	--	Shri Jagdev (ID: GRN/BG/CHT/SUR/679)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/05/	--	Gun Say (Id:GRN/BG/CHT/SUR/574)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/06/	--	Kirtanlal (GRN/BG/CHT/DHA/8177)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/07/	--	Sunita paikra (Id: GRN/BG/CHT/DHA/311)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/08/	Kumar	Shri Nand (Id: GRN/BG/CHT/SUR/6913)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/09/	Yadav	Laxman (Id: GRN/BG/CHT/SUR/4300)	Households	17/08/2024	Monitoring Surveys	Pallavi Gedam
/10/	--	Moti Bai (Id: GRN/BG/CHT/DHA/3023)	Households	18/08/2024	Monitoring Surveys	Pallavi Gedam
/11/	--	GOVIND RAM (Id: GRN/BG/CHT/DHA/3138)	Households	18/08/2024	Monitoring Surveys	Pallavi Gedam
/12/	Singh	Komal (Id: GRN/BG/CHT/DHA/8186)	Households	18/08/2024	Monitoring Surveys	Pallavi Gedam
/13/	Patel	Narender (Id: GRN/BG/CHT/SURA/5704)	Households	18/08/2024	Monitoring Surveys	Pallavi Gedam
/14/	--	Mahajan (Id: GRN/BG/CHT/SUR/9044)	Households	18/08/2024	Monitoring Surveys	Pallavi Gedam

C.4. Sampling approach

As the target population is homogeneous, PP has proposed simple random sampling plan using 95/10 as confidence/precision. This is in line with the applied methodology /B01/. 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) /B04/.

In line with paragraph 26 of the Sampling Standard, the verification team has applied acceptance sampling approach through on-site interviews on the monitoring survey as part of verification. The project participant had applied sampling approach to the monitoring survey /10/, conducted by the representatives of project participant. The verification team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B04/.

Applying paragraph 39 (c) of the sampling standard, version 09 /B04/, 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 VVB's sample size Acceptance number (c) thus determined for the sample is 0. However, VVB interviewed 11 samples from the monitoring survey done by project participants.

The information provided in the monitoring survey /10/, has been cross checked during the Onsite visit. As a part of acceptance sampling, the Verification team could confirm the monitoring 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 /B04/.

Parameter	Verification approach	Population (for VVB's sample)	VVB's Sample Size
Usage and Monitoring Survey	ASP	300	11

The details of the sample interviewed are listed in section C.3 (under the list of interviewed persons). No discrepancy was found in any of the 11 samples and thus $c=0$, i.e., no discrepant records were observed. Thus, PP's set of records has been accepted in line with §33 of the sampling standard (version 09.0) /B04/. For the impact parameters, questionnaire was prepared and was used during the survey by the PP. During the on-site interviews, the verification team cross-checked these sample documents, and no discrepancies were found in the impact parameters as well. Furthermore, the training & competency of the personnel, who conducted such test were checked. They were also interviewed to ensure that the process, method used, and their competency to confirm such standardised test were appropriately applied. The sampling technique to draw such samples were found adequate and the sample collectors were found competent to perform such task.

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

The VVB had raised Two (02) clarifications (CLs) and Three (03) corrective action requests (CARs) and satisfactorily closed.

SECTION D. Verification findings

D.1. Remaining forward action requests from validation and/or previous verifications

Not applicable

D.2. Compliance of the project implementation and operation with the registered project design document

Means of verification	Document Review, Interview
Findings	CAR 01 was raised and resolved successfully. Please refer Appendix 4 below.
Conclusion	<p>Verification team confirms that the latest available version of the monitoring report template has been used and the MR is in compliance with the monitoring report form and related monitoring report template guide.</p> <p>As verified from on-site interview and third-party survey report /10/, the audit team confirm the project implementation, and operation complies with the project design document /B03/. The starting date of operation is 25/06/2022 (commissioning of first biogas plant) which is confirmed from the PDD /B03/ and validation report /B03/. The Project activity involves bundling of 10,339 plants installed in rural areas of Chhattisgarh installed between June, 2022 to November, 2022, constructed & maintained by Samagra Vikas Mission. The project boundary in the PDD /B03/ is in line with the actual project boundary, confirmed during the onsite visit.</p> <p>CC IPL confirms that the project biogas systems are operational through on-site visits and interviews with end users. Each biogas system has a unique identification number that was provided in the end user agreement and are correct according to the project database. Each biogas plant is also physically marked with its unique identification number. Along with the serial number, the biogas technology, end username, address, commissioning date etc. had also been noted which were found to be consistent on ground.</p> <p>It is noted that no changes have been observed or identified, that may impact the additionality. No addition of component nor extension of technology, no addition nor removal of project sites, no change of values of the actual operational parameter relevant to determination of emission reductions which are within the control of the PP; no change has been observed or identified that may impact the scale of the project activity or applicability of baseline and monitoring methodology AMS-I.E version 13 /B01/. The operational status of all project bio-digesters, impact on identified SDGs from 11/08/2023 – 31/07/2024 has been taken into consideration.</p> <p>Verification team based on review of MR /01/ and provided evidence confirms that the households/end users relinquish their right of carbon credits. Verification has verified the end user agreement /05/ and commissioning certificates /20/ states the rights transfer in the lieu of free operation and maintenance of the plant. Furthermore, the bio digester plants implemented under the project is uniquely identified, thus avoiding</p>

any potential double counting. PP has ensured each of the bio digesters have their UID on them, which will prevent any kind of double counting. Further, it has been observed that same districts with same size of bio digesters are not repeated in the different projects. This was confirmed during the validation and verification site visits undertaken by VVB. Further, PP has provided an undertaking that same project is not developed under any other carbon scheme /19/.

PP has placed a grievance register in the nearby Panchayat office. During the onsite visit, verification team has checked the grievance register and found there are major grievances registered w.r.t. the project activity/12/.

Verification team has checked the information in the monitoring report /01/ and compared it against the PDD /B03/ and found to be consistent.

Verification team confirms that:

- a) The project activity is implemented as per PDD/B03/.
- b) The actual operation of the proposed CDM project activity is in line with the PDD /B03/.
- c) It has reviewed that the PDD /B03/ including the monitoring plan, the applied monitoring methodology and found that the final MR/01/ for this monitoring period is in line with all the above-mentioned documents.

Verification team of CCIPL based on review of records (grievance book) placed in the Local Panchayat office and on-site interviews confirms that a robust and effective grievance addressal mechanism is in place and however, no grievances were reported during the monitoring period/12/.

In summary, the monitoring period is reasonable, and the operation of the project activity is in accordance with the PDD /B03/.

D.3. Post-registration changes

D.3.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents¹

Not applicable

D.3.2. Corrections

Not applicable

D.3.3. Changes to the start date of the crediting period

Not applicable

D.3.4. Inclusion of a monitoring plan

Not applicable

D.3.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

Not applicable

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

D.3.6. Changes to the project design

Not applicable

D.3.7. Changes specific to afforestation and reforestation project activities

Not applicable

D.4. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	Document Review, Interview
Findings	--
Conclusion	The verification team has checked the actual monitoring plan against the monitoring plan in the PDD and monitoring methodology and applicable tools. Furthermore, the verification team has checked monitoring system by means of comparison with the information given in the monitoring plan and monitoring methodology. The monitoring plan is completely in accordance with the approved methodology /B01/ applied by the PDD/B03/.

D.5. Compliance of monitoring activities with the registered monitoring plan

D.5.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	Document Review, Interview
Findings	--
Conclusion	Verification team confirms that the data and parameters fixed ex ante are in compliance with the PDD /B03/ and monitoring plan. Please refer to the Annex 1 for assessment of each parameter.

D.5.2. Data and parameters monitored

Means of verification	Document Review, Interview
Findings	CAR03 has been raised and resolved successfully. Please refer Appendix 4 below.
Conclusion	<p>The verification team confirms that the data and parameters monitored are in compliance with the PDD /B04/ and the monitoring plan.</p> <p>It is confirmed that the verification team assessed the data / information flow from the point of monitoring to emission reduction calculation and found no gap in the same. Please refer to the Annex 4 for assessment of each parameter</p>

D.5.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Findings	--
Conclusion	According to the standard for sampling and survey /B04/ and related guidelines /B04/ the sampling plan was determined at the time of project registration and applied during the monitoring. Sampling method: Simple random sampling method is adopted as the target population is homogeneous. The sample size is determined by the requirement to achieve 95/10 precision, in line with the methodology for bi-annual survey. Sampling approaches may follow the Guideline "Sampling and surveys for

CDM project activities and programme of activities” for calculation of sample size. Data to be collected: Number of project devices of type i and operating in year y . Monitoring surveys have been carried out for the parameters 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 extent ($BC_{PJ,HH,y}$), Number of households (biogas system) in the project activity in operational per year (N_{HH}), Number of biogas system operational under the project activity (SDG7) and Improvement in health and decrease in illness (SDG3). Implementation plan: Annual or biennial. Actual implementation: - Sampling method: The sample size included all households and was randomly sampled from a list of all the project biogas system in the project for each state separately. The target population is the 10,339 during the monitoring period. The sampling frame is homogenous within itself, with respect to service level, established ex-ante baseline and user characteristics. PP has determined target sample number to be 300 as below: The total sample size has been derived using equation para 12 of appendix 1, EB 86 Annex 4, Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0. /B04/. The expected parameter values (mean, standard deviation and proportion) have been taken as per para 12 of appendix 1, EB 86 Annex 4 /B04/. Total Population (N) is 10,339 expected proportion is taken 60% and accordingly, sample size (n) come out to be 240. However, on a conservative note PP has opted to perform survey in 300 sample households.

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 /B01/. 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) /B04/.

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 monitoring survey as part of verification. The project participant had applied sampling approach to determine the monitoring 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 /B04/.

Applying paragraph 39 (c) of the sampling standard, version 09 /B07/, 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 VVB's sample size Acceptance number (c) thus determined for the sample is 0. However, VVB interviewed 11 sample from the monitoring survey done by project participants.

Parameter	Population (for VVB's sample)	VVB's Sample Size
$BC_{PJ,HH,y}$	300	11
N_{HH}		

The information provided in the monitoring survey /10/, has been cross checked during the Onsite visit. As a part of acceptance sampling, the

	verification team could confirm the monitoring 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 /B04/.
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D.6. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document Review, Interview
Findings	-
Conclusion	Not applicable, since there is no monitoring equipment which require calibration as per the monitoring plan. The equipment's used for the monitoring consists of reviewing the documents and on-site interviews.

D.7. Assessment of data and calculation of emission reductions or net removals

D.7.1. Calculation of baseline GHG emissions or estimation of baseline situation of each SDG Impact

Means of verification	Document Review, Interview
Findings	--
Conclusion	<p>As per the PDD /B03/ and the Methodology applied /B01/, Baseline emission reductions are calculated as per equation 1 of the methodology as below:</p> $BE_y = B_y * f_{NRB, y} * NCV_{biomass} * EF_{projected_fossilfuel}$ <p>Where,</p> <p>BE_y = Baseline Emissions during the year y in tCO₂e B_y = Quantity of woody biomass that is substituted or displaced in tonnes f_{NRB, y} = Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass, using survey methods or government data or approved default country specific fraction of non-renewable woody biomass (f_{NRB}) values available on the CDM website. In this case f_{NRB, y} is fixed ex-ante to be Chhattisgarh verified from registered PDD and validation report /B03/.</p> <p>NCV_{biomass} = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne)</p> <p>EF_{projected_fossilfuel} = Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 64.4 tCO₂/TJ.</p> <p>By' By is determined by using option (a) paragraph 29 of the methodology as follows:</p> <p>“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)”;</p> $B_y = N_{HH} \times (BC_{BL,HH,y} - BC_{PJ,HH,y})$ <p>Where,</p> <p>N_{HH} = Number of households in the project activity, number</p> <p>BC_{BL,y} = Average annual consumption of woody biomass per household before the start of the project activity, tonnes/household/year</p> <p>BC_{PJ,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</p>

	<p>biomass per household in the pre-project devices during the project activity, tonnes/household/year</p> <p>$BC_{BL,HH,y}$ = for the project have been considered based on baseline survey (fixed ex-ante) and publicly available reports as discussed in above section.</p> <p>The average annual consumption of woody biomass is estimated by monitoring survey methods and found to be 0.10 tonne/household/year in case of Chhattisgarh, as per the MR /01/, /02/. The same is confirmed from the monitoring survey results and found appropriate/09/. Accordingly, the baseline emissions for project activity for the monitoring period from 11/08/2023 – 31/07/2024 is calculated to be 37,214 tCO₂e.</p> <p>SDG-3: Improvement in health and decrease in illness</p> <p>The Number of households having reduced indoor pollution in the baseline scenario, the value is taken as 0.</p> <p>SDG-7: Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>The Number of households bio digesters are installed & operational in the baseline scenario, the value is taken as 0.</p> <p>SDG-8: Promote inclusive and sustainable economic growth, employment and decent work for all</p> <p>The Number of jobs created, and Number of people trained in the baseline scenario, the value is taken as 0.</p> <p>Detailed assessment of all the parameters used to calculate emission reductions is provided under section Annex 1</p> <p>The calculations presented in the Monitoring Report /01/ and the corresponding ER sheet /02/ were found appropriate and complying with provisions prescribed in the registered monitoring plan/B03/ of the registered PDD/B03/ and applied methodology/B01/.</p>
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D.7.2. Calculation of project GHG emissions or estimation of project situation of each SDG Impact

Means of verification	Document Review, Interview
Findings	--
Conclusion	<p>SDG-13: Climate Action</p> <p>The project emissions are calculated as per the applied methodology/B01/. The equations used to calculate the project emissions are reflected in section D.7.1 of this report. The total emission reductions in the current monitoring period are 35,353 tCO₂e.</p> <p>SDG-3: Ensure healthy lives and promote well-being for all at all ages</p> <p>The SDG impacts achieved for the project were 10,339 biogas units with 100% operational rate of respondents confirmed improvement in their health after the installation of the project activity.</p> <p>SDG-7: Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>The SDG impacts achieved for the project were the distribution of 10,339 biogas units out of which PP has applied the sampling and randomly</p>

	<p>choose 300 samples, and found all are operations through monitoring surveys.</p> <p>SDG-8: Promote inclusive and sustainable economic growth, employment and decent work for all The SDG impacts achieved for the project was 10 job opportunities and people were hired under this project.</p> <p>The SDG impacts achieved for the project was 2 trainings are provided every year to the people involved in this project activity</p> <p>The information provided in the monitoring report /01/ has been cross-checked with the documents provided under Appendix 3 of this verification report. Complete monitoring data is also presented in the corresponding ER calculations sheet /02/ of final Monitoring Report /01/. Verification team confirms that all SDGs claimed are used correctly presented, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from PDD/B03/</p>
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D.7.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>According to the registered PDD /B03/, a leakage assessment is only required every two years; however, such a leakage and thus assessment is required for this monitoring period.</p> <p>Project Leakage Assessment 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.</p> <p>PP has opted default option, and By is adjusted with adjustment factor of 0.95 to account leakage.</p> <p>Therefore, the net benefit is = $37,214 * 0.95 = 35,353 \text{ tCO}_2\text{e}$</p> <p>As per the demonstration in the registered PDD /B03/ and MR /01/, the adjustment factor of 0.95 has been accounted for leakage for the monitoring period.</p>

D.7.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Document Review, Interview																																											
Findings	--																																											
Conclusion	<p>The verification team confirms that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from PDD/B03/. The total number of ERs achieved during the monitoring period is 35,353 tCO₂e. The details of the summary of the emission reductions achieved during the monitoring period, has been provided in the table below:</p> <table border="1" data-bbox="475 600 1439 741"> <thead> <tr> <th>Vintage</th> <th>ER (tCO₂e)</th> </tr> </thead> <tbody> <tr> <td>11/08/2023– 31/12/2023</td> <td>14,184</td> </tr> <tr> <td>01/01/2024– 31/07/2024</td> <td>21,169</td> </tr> <tr> <td>Total for the monitoring period</td> <td>35,353 tCO₂e</td> </tr> </tbody> </table> <table border="1" data-bbox="475 808 1439 1563"> <thead> <tr> <th>SDG</th> <th>SDG Impact</th> <th>Baseline estimate</th> <th>Project estimate</th> <th>Net benefit</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>Climate Action (mandatory)</td> <td>Emission reductions</td> <td>37,214 tCO₂e</td> <td>1861 (leakage) tCO₂e</td> <td>35,353 tCO₂e</td> </tr> <tr> <td>7</td> <td>Affordable and Clean Energy</td> <td>Access to affordable and clean energy services</td> <td>Firewood based conventional</td> <td>10,339</td> <td>10,339</td> </tr> <tr> <td>8</td> <td>Decent Work and Economic Growth</td> <td>Unemployment rate, by sex, age and persons with disabilities</td> <td>No activity</td> <td>10 employments</td> <td>10 employments</td> </tr> <tr> <td>8</td> <td>Decent Work and Economic Growth</td> <td>Unemployment rate, by sex, age and persons with disabilities</td> <td>No activity</td> <td>2 trainings</td> <td>2 trainings</td> </tr> <tr> <td>3</td> <td>Good health and well being</td> <td>Improvement in health and decrease in illness</td> <td>Illness due to smoke</td> <td>10,339</td> <td>10,339</td> </tr> </tbody> </table> <p>The calculations presented in this regard in the final monitoring report/01/ and corresponding ER calculation sheet /02/ were found appropriate and complying with the provisions prescribed in the registered monitoring plan of PDD/B03/ and applied methodology/B01/. The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.</p>	Vintage	ER (tCO ₂ e)	11/08/2023– 31/12/2023	14,184	01/01/2024– 31/07/2024	21,169	Total for the monitoring period	35,353 tCO₂e	SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit	13	Climate Action (mandatory)	Emission reductions	37,214 tCO ₂ e	1861 (leakage) tCO ₂ e	35,353 tCO ₂ e	7	Affordable and Clean Energy	Access to affordable and clean energy services	Firewood based conventional	10,339	10,339	8	Decent Work and Economic Growth	Unemployment rate, by sex, age and persons with disabilities	No activity	10 employments	10 employments	8	Decent Work and Economic Growth	Unemployment rate, by sex, age and persons with disabilities	No activity	2 trainings	2 trainings	3	Good health and well being	Improvement in health and decrease in illness	Illness due to smoke	10,339	10,339
Vintage	ER (tCO ₂ e)																																											
11/08/2023– 31/12/2023	14,184																																											
01/01/2024– 31/07/2024	21,169																																											
Total for the monitoring period	35,353 tCO₂e																																											
SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit																																								
13	Climate Action (mandatory)	Emission reductions	37,214 tCO ₂ e	1861 (leakage) tCO ₂ e	35,353 tCO ₂ e																																							
7	Affordable and Clean Energy	Access to affordable and clean energy services	Firewood based conventional	10,339	10,339																																							
8	Decent Work and Economic Growth	Unemployment rate, by sex, age and persons with disabilities	No activity	10 employments	10 employments																																							
8	Decent Work and Economic Growth	Unemployment rate, by sex, age and persons with disabilities	No activity	2 trainings	2 trainings																																							
3	Good health and well being	Improvement in health and decrease in illness	Illness due to smoke	10,339	10,339																																							

D.7.5. Comparison of actual SDG Impacts with estimates in registered PDD

Means of verification	Document Review, Interview
Findings	--

Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the PDD /B03/ is 37,102 tCO ₂ e and the actual emission reductions achieved for the monitoring period is 35,353 tCO ₂ e.	
	SDG	Values estimated in ex ante calculation of approved PDD
	13	37,102 tCO ₂ e
	3	Improvement in health and decrease in illness for 100% users
	7	100% users were using firewood which is not a Clean Source of energy
	Actual values achieved during this monitoring period	35,353 tCO ₂ e
		10,339 biogas plant users now have improved health conditions
		10,339 users are accessed to clean energy source.
		10 permanent employments, and 2 trainings in a year
The emission reduction calculations provided in the spreadsheet /02/ have been verified to be correct and in line with the registered PDD /B03/.		

D.7.6. Remarks on difference from estimated value in registered PDD

Means of verification	Document Review, Interview
Findings	--
Conclusion	<p>The ex-ante annual estimated emission reduction as per registered PDD is 37,102 tCO₂e; and the ex-ante estimate value of the emission reductions for the monitoring period as per the registered PDD /B03/ is 37,102 tCO₂e and the actual emission reductions achieved for the monitoring period is 35,353 tCO₂e. For SDG 13, since actual emission reduction is lower than the estimated value and hence it is acceptable to the verification team. The monitoring report /01/ provides reason for decrease in the actual emission reduction and the same was confirmed by the verification team by interviewing the representatives of PP and by reviewing the actual implementation status of the project.</p> <p>For other SDG parameters, PP has provided justification in the Monitoring report and assessment of the same is provided below:</p> <ul style="list-style-type: none"> • SDG 3: The actual value is same as the estimated value, which is deemed appropriate and thus acceptable to the VVB. • SDG 7: The actual value is same as the estimated value, which is deemed appropriate and thus acceptable to the VVB. • SDG 8: The actual value is higher than the estimated value, same as the estimated value, which is deemed appropriate and thus acceptable to the VVB. • SDG 13: The actual value is lower than the estimated value, which is deemed appropriate and thus acceptable to the VVB.

SECTION E. Internal quality control

>>

The verification report shall pass a technical review before being submitted to the Gold Standard. The technical review is performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for validation and verification.

SECTION F. Verification/Certification opinion

>>

Carbon Check (India) Private Ltd. (CC IPL) has performed the 2nd periodic verification of the registered GS Project Activity "Smokeless living in rural areas in India (GS 11988)".

The verification team assigned by the VVB concludes that the project activity as described in the PDD /B03/ and the Monitoring report /01/, meets all relevant requirements of the Gold Standard. The verification has been conducted in-line with the GS4GG requirements project activities.

Verification methodology and process

The Verification team confirms the contractual relationship signed /14/ between the VVB, Carbon Check (India) Private Ltd. and the Project Participant on 02/08/2024. The team assigned to the verification meets the CCIPL's internal procedures including the UNFCCC/GS requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

The verification has been performed as per the requirements described in the GS4GG and constitutes the review and completion of the following steps:

- Reviewing the PDD /B03/, including the monitoring plan and the corresponding validation report /B03/;
- Desk review of the MR /01/ and other relevant documents including documents related to the project activities in emission reductions;
- Review of the applied monitoring methodology AMS-I.E. Switch from non-renewable biomass for thermal applications by the user - Version 13 /B01/;
- On-site inspection (17/08/2024- 19/08/2024)
- Resolution of CARs and CLs raised during verification
- Issuance of Verification Report

The project activity was correctly implemented according to selected monitoring methodology, monitoring plan and the registered PDD. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the document review and physical on-site interviews, the verification team confirms that the project activity has resulted in the 35,353 tCO₂e emission reductions during the reported monitoring period.

This statement covers verification period from 11/08/2023 – 31/07/2024 (inclusive).

The VVB has raised 02 clarifications and 03 corrective action requests, all of which are satisfactorily closed.

The VVB considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the registered PDD are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 35,353 tCO₂e equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.


Vintage	ER (tCO₂e)
11/08/2023– 31/12/2023	14,184

01/01/2024– 31/07/2024	21,169
Total for the monitoring period	35,353 tCO₂e

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CA	Corrective Action/ Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final Validation Report
GHG	Greenhouse gas(es)
GS	Gold Standard
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emissions
MP	Monitoring Period
MR	Monitoring Report
OSV	On Site Visit
PE	Project Emissions
PP(s)	Project Participant(s)
QC/QA	Quality Control/ Quality Assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
VVB	Validation & verification body

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Limited

Certificate of Competency

Ms. Pallavi Gedam

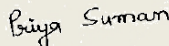
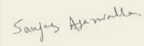
has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC 14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

<input checked="" type="checkbox"/> Validator	<input checked="" type="checkbox"/> Verifier	<input checked="" type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Technical Expert
<input type="checkbox"/> Technical Reviewer	<input type="checkbox"/> Health Expert	<input type="checkbox"/> Gender Expert	<input type="checkbox"/> Plastic Waste Expert
<input type="checkbox"/> CCB Expert	<input type="checkbox"/> Legal Expert	<input type="checkbox"/> Financial Expert	<input type="checkbox"/> Environmental, Health and Safety financial matters
<input checked="" type="checkbox"/> SDG+	<input checked="" type="checkbox"/> Social no-harm(S+)	<input checked="" type="checkbox"/> Environment no-harm(E+)	
<input checked="" type="checkbox"/> Local Expert for India			

in the following Technical Areas:

<input type="checkbox"/> TA 1.1	<input checked="" type="checkbox"/> TA 1.2	<input type="checkbox"/> TA 2.1	<input checked="" type="checkbox"/> TA 3.1	<input type="checkbox"/> TA 4.1
<input type="checkbox"/> TA 4. n	<input type="checkbox"/> TA 5.1	<input type="checkbox"/> TA 5.2	<input type="checkbox"/> TA 7.1	<input type="checkbox"/> TA 8.1
<input type="checkbox"/> TA 9.1	<input type="checkbox"/> TA 9.2	<input type="checkbox"/> TA 10.1	<input type="checkbox"/> TA 13.1	<input type="checkbox"/> TA 13.2
<input type="checkbox"/> TA 14.1	<input type="checkbox"/> TA 15.1	<input type="checkbox"/> TA 16.1		

Issue Date 5th December 2023	Expiry Date 31st December 2024
 <hr/> Ms. Priya Suman Compliance Officer	 <hr/> Mr. Sanjay Kumar Agarwalla Technical Director

Revision History of the document:

Revision date	Summary of changes
2022 ¹	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023
¹ Please refer to previous version of FM 7.9 for the revision history



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sanjay Kumar Agarwalla

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:

- | | | | |
|---|--|---|---|
| <input checked="" type="checkbox"/> Validator | <input checked="" type="checkbox"/> Verifier | <input checked="" type="checkbox"/> Team Leader | <input checked="" type="checkbox"/> Technical Expert |
| <input checked="" type="checkbox"/> Technical Reviewer | <input type="checkbox"/> Health Expert | <input type="checkbox"/> Gender Expert | <input type="checkbox"/> Plastic Waste Expert |
| <input type="checkbox"/> CCB Expert | <input type="checkbox"/> Legal Expert | <input checked="" type="checkbox"/> Financial Expert | <input type="checkbox"/> Environmental, Health and Safety financial matters |
| <input checked="" type="checkbox"/> SDG+ | <input checked="" type="checkbox"/> Social no-harm(S+) | <input checked="" type="checkbox"/> Environment no-harm(E+) | |
| <input checked="" type="checkbox"/> Local Expert for India and Bangladesh | | | |

in the following Technical Areas:

- | | | | | |
|--|--|---|---|---|
| <input checked="" type="checkbox"/> TA 1.1 | <input checked="" type="checkbox"/> TA 1.2 | <input checked="" type="checkbox"/> TA 2.1 | <input checked="" type="checkbox"/> TA 3.1 | <input checked="" type="checkbox"/> TA 4.1 |
| <input type="checkbox"/> TA 4. n | <input checked="" type="checkbox"/> TA 5.1 | <input checked="" type="checkbox"/> TA 5.2 | <input checked="" type="checkbox"/> TA 7.1 | <input type="checkbox"/> TA 8.1 |
| <input checked="" type="checkbox"/> TA 9.1 | <input checked="" type="checkbox"/> TA 9.2 | <input checked="" type="checkbox"/> TA 10.1 | <input checked="" type="checkbox"/> TA 13.1 | <input checked="" type="checkbox"/> TA 13.2 |
| <input type="checkbox"/> TA 14.1 | <input type="checkbox"/> TA 15.1 | <input checked="" type="checkbox"/> TA 16.1 | | |

Issue Date
05th December 2023

Expiry Date
31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Revision History of the document:

Revision	Summary of changes
2022 ¹	Annual revision
Jan 2023	Annual revision and template change
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

¹ Please refer to previous version of FM 7.9 for the revision history



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:

- | | | | |
|--|--|---|---|
| <input checked="" type="checkbox"/> Validator | <input checked="" type="checkbox"/> Verifier | <input checked="" type="checkbox"/> Team Leader | <input checked="" type="checkbox"/> Technical Expert |
| <input checked="" type="checkbox"/> Technical Reviewer | <input type="checkbox"/> Health Expert | <input type="checkbox"/> Gender Expert | <input checked="" type="checkbox"/> Plastic Waste Expert |
| <input type="checkbox"/> CCB Expert | <input type="checkbox"/> Legal Expert | <input checked="" type="checkbox"/> Financial Expert | <input type="checkbox"/> Environmental, Health and Safety financial matters |
| <input checked="" type="checkbox"/> SDG+ | <input checked="" type="checkbox"/> Social no-harm(S+) | <input checked="" type="checkbox"/> Environment no-harm(E+) | |
| <input checked="" type="checkbox"/> Local Expert for India and Sri Lanka | | | |

in the following Technical Areas:

- | | | | | |
|--|--|----------------------------------|---|---|
| <input checked="" type="checkbox"/> TA 1.1 | <input checked="" type="checkbox"/> TA 1.2 | <input type="checkbox"/> TA 2.1 | <input checked="" type="checkbox"/> TA 3.1 | <input type="checkbox"/> TA 4.1 |
| <input type="checkbox"/> TA 4. n | <input type="checkbox"/> TA 5.1 | <input type="checkbox"/> TA 5.2 | <input type="checkbox"/> TA 7.1 | <input type="checkbox"/> TA 8.1 |
| <input type="checkbox"/> TA 9.1 | <input type="checkbox"/> TA 9.2 | <input type="checkbox"/> TA 10.1 | <input checked="" type="checkbox"/> TA 13.1 | <input checked="" type="checkbox"/> TA 13.2 |
| <input type="checkbox"/> TA 14.1 | <input type="checkbox"/> TA 15.1 | <input type="checkbox"/> TA 16.1 | | |

Issue Date

5th December 2023

Priya Suman

Ms. Priya Suman
Compliance Officer

Expiry Date

31st December 2024

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022 ¹	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

¹ Please refer to previous version of FM 7.9 for the revision history

Appendix 3. Documents reviewed or referenced

S. No.	Document
/01/	<ul style="list-style-type: none"> a) Monitoring Report (Version 01 dated 01/08/2024) b) Monitoring Report (Version 02 dated 16/09/2024) c) Monitoring report (version 03 dated 30/09/2024)
/02/	<ul style="list-style-type: none"> • Emission reductions sheet (Corresponding to /a/) • Emission reductions sheet (Corresponding to /b/)
/03/	Distribution records including sample sales receipt
/04/	Evidence for the biodigester specifications distributed under the project
/05/	Evidence of Carbon Credits waiver
/06/	Evidence for the random sample generator for the parameters opted for sampling/survey.
/07/	Initial Sample size calculation sheet along with actual samples conducted and the reliability assessment.
/08/	Evidence for unique identification number under the project
/09/	Records of monitoring Survey of the project and Biogas user survey
/10/	Third party survey report
/11/	Employment records: <ul style="list-style-type: none"> a) Permanent Employment records b) Contractual Employment records
/12/	The grievance register applicable for the monitoring period
/13/	Monitoring log books from 11/08/2023 – 31/07/2024
/14/	Verification contract between VVB & PP
/15/	Biogas Service Records from 11/08/2023 – 31/07/2024
/16/	Training records: <ul style="list-style-type: none"> a) Summer b) Winter
/17/	Salary slips: <ul style="list-style-type: none"> a) Permanent Employee b) Contractual Employee
/18/	Monitoring Survey Forms
/19/	Contract between PP and third party for monitoring survey
/20/	Monitoring survey Questionnaire template

/21/	Sampling Calculator for sample size, and precision level
/22/	Monitoring report for Monitoring period 01 version 07 dated 26/12/2023

Background Documents

Ref no.	Reference Document
/B01/	AMS-I.E. Switch from non-renewable biomass for thermal applications by the user - Version 13
/B02/	<ol style="list-style-type: none"> 1. Gold Standard Principles and Requirements version 1.2, dated 24/10/2019 2. Gold Standard Programme of Activity Requirements version 1.2, dated 24/10/2019 3. GS Validation & Verification Body Requirements version 2.0, dated 14/01/2021 4. Community Services Activity Requirements (version 1.1) under GS4GG https://globalgoals.goldstandard.org/200-gs4gg-community-services-activity-requirements/
/B03/	PDD, Version 6.0 dated 06/12/2023 and corresponding Validation Report
/B04/	<p>Standards</p> <ol style="list-style-type: none"> a) CDM Sampling Standard, version 09.0 b) Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0. c) Gold standard validation and verification standard, version 01
/B05/	IPCC 2006, volume 2, chapter 1
/B06/	Site Visit and Remote Audit Requirements and Procedures, version 1.0 dated 17/11/2021
/B07/	<ol style="list-style-type: none"> 1. Validation and Verification Standard for PoAs, version 03.0 2. Project Standard for PoAs, version 03.0 3. Project Cycle Procedure for PoAs, version 03.0
/B08/	Validation report for the design certification and verification report for 1st Monitoring period (performance certification)03 dated 18/09/2022

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

Table 1. FARs from this verification

FAR ID	XX	Section no.		Date:
Description of CAR				
NA				
PP response				Date:
Documentation provided by the CME				
DOE assessment				Date:

Table 2. CARs from this verification

CAR ID	01	Section no.	MR	Date: 09/09/2024
Description of CL				
In KPI Table of the MR, below observation need to be fulfilled as per the Template filling guideline;				
1) PP to try to maintain the same font and font size throughout the MR.				
2) All Dates must be in the following format: DD/MM/YYYY				
3) In KPI Table of the MR, monitoring period number is written to be 1, however this period is the 2 nd monitoring period.				
Project participant response				Date: 16/09/2024
1. Same has been done in revised version of MR (version 2).				
2. Format of the dates has been changed according to given pattern in revised version of MR.				
3. Monitoring period number is been corrected to 2 in new version of MR.				
Documentation provided by project participant				
VVB assessment				Date: 20/09/2024
PP has submitted the revised MR, KPI table has been made inline with the MR filling guideline, this has been checked and deemed to be appropriate. Hence CAR 01 is closed.				

CAR ID	02	Section no.	MR	Date: 09/09/2024
Description of CL				
Under section D.3 of the MR , PP needs to add the Value obtained last monitoring period.				
Project participant response				Date: 16/09/2024
Section D.3 of MR has been revised in version no 2 of MR.				
Documentation provided by project participant				
VVB assessment				Date: 20/09/2024
PP has submitted the revised MR, section D.3 has now be provided with the values from the last monitoring period as per the template requirement. This has been checked and deemed to be appropriate to the verification team. Hence CAR 02 is closed.				

CAR ID	03	Section no.	MR	Date: 09/09/2024
Description of CL				
<p>In section D.1 of the MR, PP has considered the FNRB value to be 85%, however during the last MP the value mention to be 80 %.</p> <p>Also PP is requested to check the Emission reduction calculation considering the correct value of the fNRB.</p>				
Project participant response				Date: 16/09/2024
Section D.1 is corrected now in new version of MR.				
Documentation provided by project participant				
VVB assessment				Date: 20/09/2024
<p>PP has submitted the revised MR, section D.1 has now been rectified as per the registered PDD. This has been checked and deemed to be appropriate to the verification team. Hence CAR 03 is closed.</p>				

Table 2. CLs from this verification

CL ID	01	Section no.	MR	Date: 09/09/2024
Description of CL				
<p>PP in Emission reduction sheet mentioned the implementation schedule which represent every month 10339 ICS distributed, However MR states 10339 for this monitoring period. PP to clarify the same.</p>				
Project participant response				Date: 16/09/2024
<p>Total 10,339 bio gas plants had been implemented in this project during first year of monitoring period and no further bio gas plants been added to the project in current monitoring period. In MR it states that 10,339 are being working in good condition for all those months covered in 2nd Monitoring period.</p>				
Documentation provided by project participant				
VVB assessment				Date: 20/09/2024
<p>PP has submitted the MR and the justification provided by the PP is deemed to acceptable to the verification team, and the same has been observed during the on-site visit conducted by VVB. Hence CL 01 is closed.</p>				

CL ID	02	Section no.	G.1 in MR	Date: 09/09/2024
Description of CL				
<p>PP is requested to provide the following documents;</p> <ol style="list-style-type: none"> 1. Monitoring survey report. 2. Sampling plan 3. Evidence for random sample selection 4. Grievance register and compliant records 5. Monitoring survey questionnaire 6. Evidence of Carbon Credits waiver 7. Biogas construction schedule 8. SDG tool 				

- 9. Training records
- 10. Employment records
- 11. Sustaincert's review report for the 1st performance certification

PP response **Date: 16/09/2024**

All documents have been provided in zip folder.

Documentation provided by PP

VVB assessment **Date: 20/09/2024**

PP has submitted the above requested documents; this has been checked by the verification team. Hence CL 02 is closed.

Annex 1: Assessment of data and parameters fixed ex-ante at the time of validation

Relevant SDG Indicator	SDG 13, Climate action
Parameter	N_{HH}
Data unit	Number
Default values used	10,339
Purpose of data	Estimation of Baseline
Source of verification of the source	Project Proponent's project database

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$BC_{BL,HH,y}$
Data unit	tonnes/household/year
Default values used	4.7
Purpose of data	Estimation of Baseline
Source of verification of the source	Baseline survey

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$f_{NRB,y}$
Data unit	Percentage
Default values used	80%
Purpose of data	Estimation of Baseline
Source of verification of the source	Calculated

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$NCV_{biomass}$
Data unit	TJ/tonne
Default values used	0.0156
Purpose of data	Calculation of Baseline emissions
Source of verification of the source	IPCC default value for wood/B05/

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$EF_{projected_fossilfuel}$
Data unit	tCO ₂ /TJ
Default values used	64.4
Purpose of data	Estimation of Baseline
Source of verification of the source	Default value from the methodology, AMS-I.E

Annex 2: Assessment of data and parameters monitored

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 13 Indicator 13.2.1 "Amount of CO ₂ e emissions reduced by the project per year"
Data / Parameter: (as in monitoring plan of PDD):	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 extent. (BC _{PJ,HH,y})
Unit	tonnes/household/year
Measuring frequency/Time Interval:	At least once in every two years.
Reported value	0.10
Verified Source of Data	Value obtained from monitoring survey of samples /09/ /10/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 13 Indicator 13.2.1 “Amount of CO2e emissions reduced by the project per year”
Data / Parameter: (as in monitoring plan of PDD):	Number of households (biogas system) in the project activity in operational per year (N _{HH})
Unit	Number
Measuring frequency/Time Interval:	At least once in every two years.
Reported value	10,339
Verified Source of Data	Value obtained from Project Proponent’s project database.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.

data and reporting of emission reductions and are necessary QA/QC processes in place?	
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 08
Data / Parameter: (as in monitoring plan of PDD):	Unemployment rate, by sex, age and persons with disabilities
Unit	Number
Measuring frequency/Time Interval:	Annual
Reported value	2
Verified Source of Data	Value obtained from records of training programme /16/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 08
Data / Parameter: (as in monitoring plan of PDD):	Quantitative employment and income generation (8.5.2)
Unit	Number
Measuring frequency/Time Interval:	Annual
Reported value	10

Verified Source of Data	Value obtained from employment records /11/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 7
Data / Parameter: (as in monitoring plan of PDD):	Access to affordable and clean energy services (7.1.2)
Unit	Number
Measuring frequency/Time Interval:	At least once in two years
Reported value	10,339
Verified Source of Data	Value obtained from Biogas user survey /09/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

possible been applied or has a request for deviation been approved?	
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Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Relevant SDG Indicator	SDG 3
Data / Parameter: (as in monitoring plan of PDD):	Improvement in health and decrease in illness (3.9.1)
Unit	Number
Measuring frequency/Time Interval:	At least once in two years
Reported value	100% satisfaction 10,339 plant users
Verified Source of Data	Value obtained from Biogas user survey /09/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA