



Verification and certification report form for
GS project activities
(Version 04.0)

BASIC INFORMATION

Title and GS4GG reference number of the project activity	Title: Domestic Biogas Project for rural households in India GS reference no.: GS 6275
Scale of the project activity	<input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale <input type="checkbox"/> Micro-scale
Version number of the verification and certification report	1.2
Completion date of the verification and certification report	11/01/2024
Monitoring period number and duration of this monitoring period	6 th monitoring period. Duration: 07/02/2022 to 06/02/2023 (including both days)
Version number of the monitoring report to which this report applies	3.2 of 02/01/2024
Crediting period of the project activity corresponding to this monitoring period	07/02/2022 to 06/02/2027
Project participants	Value Network Ventures Advisory Services Pte. Ltd.
Host Party	India
Applied methodologies and standardized baselines	AMS-I.E.: Switch from non-renewable biomass for thermal applications by the user -Version 12.0
Mandatory sectoral scopes	1 (TA 1.1)
Conditional sectoral scopes, if applicable	N/A
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	41,877 tCO ₂ e
Certified amount of GHG emission reductions or GHG removals for this monitoring period	17,051 tCO ₂ e
Name and VVB reference number of the VVB	Carbon Check (India) Private Limited
Name, position and signature of the approver of the verification and certification report	<i>Priya Suman</i> Priya Suman, Compliance Officer

SECTION A. Executive summary

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Carbon Check (India) Private Ltd. (CC IPL) has performed the sixth periodic verification of the GS project “Domestic Biogas Project for rural households in India” (GS project id: GS 6275) for the period 07/02/2022 to 06/02/2023 (inclusive of both the dates). The project activity involves installation and use of household bio- digester units of various sized (2m³, 3m³, 4m³ and 6m³) which replaces non-renewable firewood used in the absence of bio-digesters. The bio-digesters are based on cattle dung and produced biogas is used for cooking purposes. The project involves 12,695 bio-gas units installed in rural areas of Madhya Pradesh, Bihar and Jharkhand commissioned from 07/02/2017 onwards.

Verification methodology and process

The Verification team confirms the contractual /10/ relationship signed on the 17/05/2023 between the Carbon Check (India) Private Ltd. (hereafter the “VVB”) and the project participant - Value Network Ventures Advisory Services Pte. Ltd. The team assigned to the verification meets the Carbon Check (India) Private Ltd’s internal procedures including the UNFCCC requirements for the team composition and competence. CC IPL has conducted a thorough contract review as per UNFCCC and Carbon Check’s procedures and requirements.

The verification has been performed as per the requirements described in the Gold Standard for the Global Goals Principles & Requirements (version 1.2) /B01-a/; and GS4GG VVS version 1.0 /B01-b/ and constitutes the review and completion of the following steps:

- Review of the registered RCP PDD (version 4.0; Dated: 16/10/2022) /09/, including the monitoring plan and the corresponding validation report /09/, the Sustainability Matrix and monitoring data;
- Desk review of the MR, emission reduction spreadsheet
- Review of the applied monitoring methodology “AMS-I.E ‘Switch from non-renewable biomass for thermal applications by the user” (version 12.0) /B05/;
- Review of any CMP and EB decisions, clarifications and guidance and the Gold Standard Secretariat;
- On-site assessment (10/07/2023 to 15/07/2023)
- Resolution of CARs and CLs raised during verification.
- Issuance of Verification Report

In Carbon Check’s opinion, the project activity was correctly implemented according to selected monitoring methodology monitoring plan and the registered RCP PDD /09/. The monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through document review and on-site assessment, the verification team confirms that the project has resulted in the 17,051 tCO₂e emission reductions during this sixth monitoring period. The GHG emission reductions and non-GHG parameters were correctly calculated/monitored based on the approved monitoring methodology “AMS-I.E, “Switch from non-renewable biomass for thermal applications by the user”, (version 12) /B05/ and the monitoring plan contained in the registered RCP PDD (version 4.0; Dated: 16/10/2022) /09/.

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	IR	Raychoudhury	Rishi K.	CC IPL	X	X	X	X
2.	Technical Expert	IR	Anand	Amit	CC IPL	X	X	X	X
3.	Team Member	IR	K V	Kiran	CC IPL	X	X	X	X
4.	Trainee Assessor	IR	Raj	Piyush	CC IPL	X	X	X	X
5.	Trainee Assessor	IR	Nifiya J	Jeni Miraclin	CC IPL	X	NA	NA	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

SECTION C. Application of materiality

The threshold of materiality was evaluated based on “Guideline: Application of materiality in verifications” (version 02.0) /B09/. It was concluded that the materiality threshold applicable to the project activity based on actual emission reductions achieved is 5% of 17,051 tCO₂e which is equal to 853 tCO₂e.

In planning the verification, verification team took cognizance of para. 11 and para. 12 of the “Guideline: Application of materiality in verifications” (version 02.0) /B09/ and a materiality threshold of 853 tCO₂e is determined for the current verification of the project activity.

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Human Error: Recording and reporting of the information in the ER spreadsheet.	Medium	All the ER spreadsheet data of the bio-digester plants database, determination of parameters for operational of Bio-digester plants including data calculation. This includes all the parameters to be monitored ex-post as per the PDD	The risk were mitigated by reviewing the training records of the personnel involved in the data capture and calculations. The monitoring responsibilities will be reviewed. Also, the ER data/calculations will be cross-checked to insure error-free data.

2.	Information System: Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Medium	The data is recorded in spreadsheets based on the raw data collected during the field visits. Access to the spreadsheets for calculation of ERs, monitoring and sales database and baseline project & baseline, and other test records.	The identified risk were mitigated by reviewing the management of access to the records. It will be confirmed through interviews whether the raw data is collected by the field personnel and then transmitted and stored electronically to the PP's office. The data quality control to be checked.
3.	Sample	Medium	The sample size is not suitable, or the surveyed plants are not random (If applicable)	Cross-check the procedure to identify the sample size against the sampling guideline and standard and confirm the sample size is calculated correctly.

C.2. Consideration of materiality in conducting the verification

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In line with the Guidelines for Application of materiality /B09/ in verification, a reasonable level of assurance is defined for the verification of the project by complete verification of all the monitoring records was done by the verification team and compared with the values indicated in the emission reduction spreadsheet.

Some inconsistencies were identified and subsequently finding was raised. These findings are detailed in Appendix 4 and they were successfully closed. Therefore, related identified mistakes as listed in findings in Appendix 4 to this report have been determined to be immaterial. And thus, it is confirmed that there are no material errors, omissions or misstatements and a reasonable level of assurance is established.

SECTION D. Means of verification

D.1. Desk/document review

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The verification was performed primarily based on the review of the Monitoring report /01-e/, emission reduction worksheet /02-c/ and 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.

D.2. On-site inspection

Duration of on-site inspection: 10/07/2023 to 15/07/2023				
No.	Activity performed on-site	Site location	Date	Team member
1.	Verify actual implementation of the project, management structure, project participant	Chhindwara and Betul (Madhya Pradesh), Gaya and Arwal (Bihar), Dumka, Deoghar and Jamtara (Jharkhand)	10/07/2023 to 15/07/2023	Rishi K Raychoudhury
2.	Physically checking the project technology, end user details, identification of project biogas systems, whether the pre-project fuel is in use, whether the project biogas systems are inoperational			Amit Anand
				Kiran K V
				Piyush Raj
3.	Management and operational system: Documentation, allocation of responsibilities, qualification and training, data recording & archiving, internal audit and management review and emergency procedures			
4.	Interviews with end user and other stakeholders			

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kalita	Ranjit	VNV	10/07/2023 to 15/07/2023	PDD development, GS requirements, Emission reduction calculations, methodology applicability.	Rishi K Raychoudhury Amit Anand
2.	Pardhi	Rameshwar	AKKPS	10/07/2023 & 11/07/2023	Project Design, ownership details, carbon credit sharing arrangements, monitoring and reporting arrangements, QA/QC procedures, baseline assessment, project technology	Kiran K V Piyush Raj
3.	Urkude	Ravindra	AKKPS	10/07/2023 & 11/07/2023		
4.	Baghel	Arun	AKKPS	10/07/2023		
5.	Dehariya	Yogesh	End User	10/07/2023		
6.	Sanodiya	Govind	End User	10/07/2023	Commissioning details, Agreement with project developers, Functioning of biogas systems, sustainability issues, baseline fuel. Post project benefits, Impact on health and livelihood.	
7.	Yaduwasi	Karan	End User	10/07/2023		
8.	Solanki	Rajkumar	End User	10/07/2023		
9.	Yaduwanshi	Aditya	End User	11/07/2023		
10.	Amrute	Shweta	End User	11/07/2023		
11.	Khobare	Jagdish	End User	11/07/2023		
12.	Pawar	Vishnu	End User	11/07/2023		
13.	Pawar	Krishnarao	AKKPS	11/07/2023		
14.	Kumar	Vinod	AKKPS	13/07/2023		
15.	Singh	Satya	End User	13/07/2023	Commissioning details, Agreement with project developers, Functioning of biogas systems, sustainability issues, baseline fuel. Post project benefits, Impact on health and livelihood.	
16.	Pandit	Binkatesh	End User	13/07/2023		
17.	Verma	Ramayodhya	AKKPS (Field co-ordinator-Bihar)	13/07/2023	Maintenance, grievance system, field visit etc.	
18.	Ray	Krishna Prasad	AKKPS (Field co-ordinator-Jharkhand)	15/07/2023	Maintenance, grievance system, field visit etc.	
19.	Raut	Shambhu Kr.	RET	15/07/2023	Details of survey, methodology, survey results, QA/QC procedure etc.	
20.	Hajra	Sheela	End User	15/07/2023	Commissioning details, Agreement with project developers, Functioning of biogas systems, sustainability issues, baseline fuel. Post project benefits, Impact on health and livelihood.	
21.	Lal	Munni	End User	15/07/2023		
22.	Hembram	Munshi	End User	15/07/2023		
23.	Singh	Kishore Kr.	End User	15/07/2023		

D.4. Sampling approach

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PP’s sampling approach:

PP has proposed simple random sampling plan using 90/10 as confidence / precision for annual monitoring. This is in line with the applied methodology /B05/. 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) /B07/.

The monitoring parameters monitored through the sampling plan are:

- 1) Number of operating unit (Bio-digesters) under the project activity.
- 2) Average annual consumption of woody biomass per household in the pre-project devices during the project activity.

CCIPL’s verification sampling approach:

As per para.25 of the Standard: Sampling and surveys for CDM project activities and programmes of activities (version 09.0) /B08/, the verification team has to verify whether the project participant have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan. The verification includes determining:

- (a) Whether the required confidence/precision has been met.
- (b) Whether the selected sample was representative of the population.

In line with para. 26 of the Sampling Standard (version 09.0) /B08/, the verification team has applied a sampling approach for remote surveys as part of verification. Since PD had applied a sampling approach, the verification team has chosen acceptance sampling for monitoring parameters in accordance with para. 28 of the sampling standard (version 09.0) /B08/.

The following table illustrates the agenda covered during the acceptance sampling by the VVB in accordance with Table 1, para. 37 of “Standard: Sampling and surveys for CDM project activities and programmes of activities (version 09.0) /B08/;

Parameter	How the PP conducted sampling surveys	How the VVB could obtain records for verification	Criteria for deciding what ultimately constitutes a discrepancy
Number of operating unit (Bio-digesters) under the project activity- proportionate parameter	Sampling based survey (questionnaire survey/interviews)	Cross-check of a sample of PD’s samples (Questionnaire, operation surveys/interviews) including but not limited to following: <ul style="list-style-type: none"> • Consistency between the information as contained in Survey sheet and revealed from on-site inspection interviews. • Baseline scenario • Enquire/observe whether bio-digesters are in use or not? 	VVB results, accounting for duly justified differences.
Average annual consumption of woody biomass per household in the pre-project devices under the project activity – mean value parameter	Sampling based survey (questionnaire survey/interviews)	Cross-check of a sample of PD’s samples (Questionnaire, operation surveys/interviews) including but not limited to following: <ul style="list-style-type: none"> • Consistency between the information as contained in the survey sheet and found from on-site inspection and interviews. • Enquire about firewood 	VVB results, accounting for duly justified differences.

		consumption in the project scenario.	
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CCIPL has considered para 39 (a) of “Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 09.0” /B08/ for determining the sampling size to be visited by VVB /12/. In case of the current verification, the estimated emission reduction is 41,877 tCO₂e per year, the verification team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgment and guidance in the Standard ‘Sampling and surveys for CDM project activities and programme of activities’ version 09.0 /B08/: Considering Acceptable Quality Level (AQL): 0.5% Unacceptable Quality Level (UQL): 20% and producer risk of 10% and consumer risk of 5% a sample size of 14 was required as per Table2 in the referred Standard /B08/. Acceptance number (c) thus determined for the sample size is 0. CCIPL choose 14 samples to verify the project activity. The verification team selected random samples from PD’s sample list. The operational status of project biogas systems was checked during the site visit for the identified samples from areas which were safe and logistically possible to travel. The biogas system details (unique serial number, date of commissioning, type of biogas system, technology, name of user and address) were also checked and found to be consistent with that reported in the installation database. Some inconsistency was observed for 2 samples out of the 14 samples with respect to the observations in the field, interviews & document review that reported in the survey report. The non-operational period found outside the monitoring period which is confirmed during onsite visit /12/ i.e., household response and maintenance records /06/. This assessment of the selected samples was done to ascertain the implementation status of the project activity w.r.t. the biogas system types, serial number, location etc.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	-	-
Compliance of the project implementation and operation with the registered PDD	CL 01	CAR 01	-
Post-registration changes	-	-	-
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	CL 04	-	-
Compliance of monitoring activities with the registered monitoring plan	CL 03 CL 05 CL 06	CAR 02	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals	-	-	-
Assessment of reported sustainable development co-benefits	CL 02	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	-	-	-
Total	06	02	-

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	Document Review and Interview
Findings	No finding raised.
Conclusion	CCIPL confirms that the monitoring report initial version 1.0 of 18/04/2023 and final version 3.2 of 02/01/2024 are prepared using GS monitoring report template

	version 1.1 of 14/10/2020 /B03/ which is the latest available template and completed with relevant information as per the template requirement.
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E.2. Remaining forward action requests from validation and/or previous verifications

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Based on the review of validation report /09/ and previous verification report /08/, no FAR found raised which needed to be addressed during this verification.

E.3. Compliance of the project implementation and operation with the registered project design document

Means of verification	Document Review and Interview
Findings	CL 01 & CAR 01 is raised and closed satisfactorily. Please refer appendix 4 for further details.
Conclusion	<p>As verified from on-site audit and third-party survey report /05/, the audit team confirm the project implementation and operation complies with the updated project design document /09/. The biogas systems are constructed and commissioned by approved Renewal Energy Technicians (RETs) at each state who are under the contractual framework of AKKPS. Contractual arrangements between RET and AKKPS were already validated as per the validation report /09/. End users transfer the ownership of carbon credit /07/ via end user agreement as validated and verified during previous verification /09, 08/. Value Network Ventures Advisory Services Pte. Ltd. is working as partner /14/ to AKKPS for sale of carbon credit generated from the project activity. The operational and management structured is verified from document review and on-site interview /12/. The project considers 12,695 household bio-digester plants commissioned in between 07/02/2017 – 08/02/2018 in Madhya Pradesh, Bihar and Jharkhand. At each project location (end user point) the bio-digester replaces firewood consumption to meet energy demand in kitchen. The operational status of all 12,695 bio-digesters are confirmed during the monitoring period as per third party sample survey report /05/ and on-site visit /12/ in some sample biogas systems.</p> <p>CC IPL has considered 14 bio-digesters samples as explained in section D.4 above to ascertain accuracy of information. CC IPL confirms the project biogas systems are operating in all samples except 2, which were found non-operational. However, household mentioned that plants were operational during monitoring period and PD has provided maintenance records /06/ for both samples which establish operational status of both project devices. During onsite audit, each biogas system has unique identification number which has been provided in the end user agreement and are correct as per project database. The unique identification is also marked at each biogas plant physically. 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>The project has a continuous grievance procedure system in place that keeps track of all grievances received and their status. Each biogas user is provided a service card /06/ with contact details of technician/project proponent and responsible supervisor to report any input/grievance or complaint. The supervisor/project maintenance team also keeps a register in which they document grievances (if any) that any user files as part of the ongoing grievance procedure. Any issue of the biogas system is logged in to the service card together with the progress of the action being done and record maintained. The supervisor submits a summary of their records /06/ to project proponent for compilation.</p> <p>During this monitoring period, VVB found that no major grievance/complaint /06/ received from the biogas users. Routines checks of the digester system were carried out by the Biogas Service Center technician /14/.</p> <p>It is noted that no changes have been observed or identified which 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</p>

	<p>parameter relevant to determination of emission reductions which are within the control of the PD; 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 12 /B05/. The operational status of all project bio-digesters, impact on identified SDGs from 07/02/2022 to 06/02/2023 has been taken into consideration.</p> <p>It is Carbon Check’s opinion that the project implementation and operation complies with the RCP project design document.</p>
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E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents¹

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Not Applicable

E.4.2. Corrections

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Not Applicable

E.4.3. Changes to the start date of the crediting period

>>
Not Applicable

E.4.4. Inclusion of a monitoring plan

>>
Not Applicable

E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

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Not Applicable

E.4.6. Changes to the project design

>>
Not Applicable

E.4.7. Changes specific to afforestation and reforestation project activities

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Not Applicable

E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	Document Review and Interviews
Findings	CL 04 is raised and closed satisfactorily. Please refer appendix 4 for further details
Conclusion	During this monitoring period, the validated and registered monitoring plan /09/ was found to be in accordance with the applied methodology /B05/. All monitoring parameters, monitoring procedures follow the methodology requirements and registered monitoring plan.

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).

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	Document Review and Interviews									
Findings	No finding raised.									
Conclusion	The following ex-ante parameters are considered in the calculation of the emission reductions:									
	Parameter	Value			Description/Assessment					
	Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass ($f_{NRB,y}$) in percentage.	86.4% for MadhyaPradesh 87.6% for Jharkhand and 97.4% for Bihar			f_{NRB} is calculated as per tool to calculate the fraction of non-renewable biomass and fixed for the entire crediting period /09/.					
	Number of households in the project activity in year y (N_{HH})	Plant capacity	MP	Bihar	Jharkhand	The number of households in the project activity is fixed based on commissioning report, database /03/ and as well as RCP PDD /09/.				
		2m ³	6,153	750	1,603		8,506			
		3m ³	3,796	87	55		3,938			
		4m ³	240	3	0		243			
6m ³		8	0	0	8					
Average annual consumption of woody biomass per household before the start of the project activity ($BC_{BL,HH,y}$) in t/household/year	<table border="1"> <tr> <td>M.P</td> <td>3.93</td> </tr> <tr> <td>BH</td> <td>4.46</td> </tr> <tr> <td>JH</td> <td>3.87</td> </tr> </table>			M.P	3.93	BH	4.46	JH	3.87	The baseline fire-wood consumption is as per third party survey report fixed ex-ante in the registered RCP PDD /09/.
M.P	3.93									
BH	4.46									
JH	3.87									
Net calorific value of the non-renewable woody biomass that is substituted ($NCV_{biomass}$) in TJ/Tonne	0.0156			Net Calorific Value of the wood used as cooking fuel. Default value as per the applied methodology /B05/.						
Emission factor for the substitution of non-renewable woody biomass by similar consumers ($EF_{projected_fossilfuel}$) in tCO ₂ /TJ	64.4			Emission factor for the substitution of non-renewable biomass by similar consumers. Default value as per the applied methodology /B05/.						

	CCIPL is able to confirm that the Data and parameters fixed ex ante have been implemented in full compliance with the registered monitoring plan.
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E.6.2. Data and parameters monitored

Means of verification	Desk Review and Interviews																								
Findings	CL 05, CL 06 & CAR 02 are raised and closed satisfactorily. Please refer appendix 4 for further details.																								
Conclusion	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 40%;">Parameter</th> <th colspan="2" style="width: 20%;">Value</th> <th style="width: 40%;">Description/Assessment</th> </tr> </thead> <tbody> <tr> <td>Date of commissioning of project device type i</td> <td colspan="2" style="text-align: center;">12,695</td> <td>There is no addition or removal of biogas plants in the project activity since validated number of plants in RCP /09/. Hence the number is correct.</td> </tr> <tr> <td rowspan="4">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}).</td> <td>State</td> <td>tonnes/HH/year</td> <td rowspan="4">As per survey, some samples reported fire-wood consumption during the monitoring period. PD has accordingly considered the same for the entire population with the same rate which is conservative. The verification team found the reported values are consistent with survey report and survey forms. Hence, PD's record and result is conservative.</td> </tr> <tr> <td>Madhya Pradesh</td> <td>0.33</td> </tr> <tr> <td>Bihar</td> <td>0.90</td> </tr> <tr> <td>Jharkhand</td> <td>0.26</td> </tr> <tr> <td>Number of households (biogas system) in the project activity in operational per year (N_{HH,y})</td> <td colspan="2" style="text-align: center;">11,793</td> <td>The parameter is monitored through third party survey /05/. The survey identified sampled households as per UNFCCC guideline. As per survey results 79 out of 85 samples were found in operation during the monitoring period. The verification team visited random 14 biogas systems from PP's sample record and found 12 out of 14 visited samples are in operational. The non-operational period found outside the monitoring period which is confirmed during onsite visit /12/ and maintenance records /06/. All users confirmed that during the monitoring period biogas plants are completely operating. Hence, reported value is correct.</td> </tr> </tbody> </table>			Parameter	Value		Description/Assessment	Date of commissioning of project device type i	12,695		There is no addition or removal of biogas plants in the project activity since validated number of plants in RCP /09/. Hence the number is correct.	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}).	State	tonnes/HH/year	As per survey, some samples reported fire-wood consumption during the monitoring period. PD has accordingly considered the same for the entire population with the same rate which is conservative. The verification team found the reported values are consistent with survey report and survey forms. Hence, PD's record and result is conservative.	Madhya Pradesh	0.33	Bihar	0.90	Jharkhand	0.26	Number of households (biogas system) in the project activity in operational per year (N _{HH,y})	11,793		The parameter is monitored through third party survey /05/. The survey identified sampled households as per UNFCCC guideline. As per survey results 79 out of 85 samples were found in operation during the monitoring period. The verification team visited random 14 biogas systems from PP's sample record and found 12 out of 14 visited samples are in operational. The non-operational period found outside the monitoring period which is confirmed during onsite visit /12/ and maintenance records /06/. All users confirmed that during the monitoring period biogas plants are completely operating. Hence, reported value is correct.
	Parameter	Value		Description/Assessment																					
	Date of commissioning of project device type i	12,695		There is no addition or removal of biogas plants in the project activity since validated number of plants in RCP /09/. Hence the number is correct.																					
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Jharkhand		0.26																							
Number of households (biogas system) in the project activity in operational per year (N _{HH,y})	11,793		The parameter is monitored through third party survey /05/. The survey identified sampled households as per UNFCCC guideline. As per survey results 79 out of 85 samples were found in operation during the monitoring period. The verification team visited random 14 biogas systems from PP's sample record and found 12 out of 14 visited samples are in operational. The non-operational period found outside the monitoring period which is confirmed during onsite visit /12/ and maintenance records /06/. All users confirmed that during the monitoring period biogas plants are completely operating. Hence, reported value is correct.																						

	Carbon Check is able to confirm that the monitoring has been implemented in full compliance with the registered monitoring plan and all the parameters listed in the registered monitoring plan have been completely monitored.
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E.6.3. Implementation of sampling plan

Means of verification	Desk Review and Interviews																
Findings	CL 03 is raised and closed satisfactorily. Please refer appendix 4 for further details.																
Conclusion	<p>According to the standard for sampling and survey /B08/ and related guidelines /B07/ the sampling plan was determined at the time of project registration and applied during the monitoring.</p> <ul style="list-style-type: none"> - Sampling method: Simple random sampling method is adopted as the target population are of homogeneous. The sample size is determined by the requirement to achieve 90/10 in line with the methodology for annual survey. Sampling approaches may follow the Guideline “Sampling and surveys for CDM project activities and programme of activities” /B07/ for calculation of sample size. - Data to be collected: Number of project devices of type i and operating in year y. - Implementation plan: Annual. <p>Actual implementation of sampling plan during the monitoring plan:</p> <ul style="list-style-type: none"> - Sampling method: The sample size included all households and was randomly sampled from a list of all the project biogas system in the project. The target population is the 12,695 plants covering all three states. The sampling frame is homogenous within itself, with respect to service level, established ex-ante baseline and user characteristics. Depending on the number of biogas system commissioned in each State, PD has first determined target sample number from total target of 85 biogas as below: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>State</th> <th>No. of Biogas plants</th> <th>Proportion</th> <th>No. of samples</th> </tr> </thead> <tbody> <tr> <td>M.P</td> <td>10,197</td> <td>80.32%</td> <td>68</td> </tr> <tr> <td>Bihar</td> <td>840</td> <td>6.62%</td> <td>6</td> </tr> <tr> <td>Jharkhand</td> <td>1,658</td> <td>13.06%</td> <td>11</td> </tr> </tbody> </table> <p>In actual the survey took 85 samples.</p> <p>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. /B07/. The expected parameter values (mean, standard deviation and proportion) have been taken as per para 12 of appendix 1, EB 86 Annex 4 /10/. From each state, PD has randomly selected the biogas system using online tool “https://stattrek.com/statistics/random-number-generator.aspx”) for survey.</p> <p>Data collected: Questionnaire survey form used by third party surveyor /05/ and a detailed survey report has been provided /05/. Since the relative margin of error obtained is less than 10% for the monitored parameter, relative precision of the data is statistically acceptable and deemed representative of the population.</p> <p>Survey result shows 92.94% operational status of all sampled bio-gas systems and hence desired confidence precision has been still achieved.</p> <p>The verification team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgment and guidance in the Standard ‘Sampling and surveys for CDM project activities and programme of activities’ version 09.0 /B08/: Considering Acceptable Quality Level (AQL): 0.5% Unacceptable Quality Level (UQL): 20% and producer risk of 10% and consumer risk of 5% a sample size of 14 was required as per Table2 in the referred Standard /B08/. Acceptance number (c) thus determined for the sample size is 0. CCIPL choose 14 samples to verify the project activity. The verification team selected random samples from PD’s sample list.</p>	State	No. of Biogas plants	Proportion	No. of samples	M.P	10,197	80.32%	68	Bihar	840	6.62%	6	Jharkhand	1,658	13.06%	11
State	No. of Biogas plants	Proportion	No. of samples														
M.P	10,197	80.32%	68														
Bihar	840	6.62%	6														
Jharkhand	1,658	13.06%	11														

	VVB confirms that the sampling size and the method of on-site assessment was in line with the requirements of the sampling standard /B08/.
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E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	There is no monitoring equipment involved in monitoring of the required parameters. Hence, no calibration requirement applicable for the project activity.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>Baseline emissions are estimated as per equation 1 of AMS-I.E version 12 as follows:</p> $BE_y = B_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossil_fuel}$ <p>Where:</p> <p>BE_y = Baseline emissions during the year y in tCO₂e</p> <p>B_y = Quantity of woody biomass that is substituted or displaced in tonnes</p> <p>$f_{NRB,y}$ = Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass (fNRB)</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>$EF_{projected_fossil_fuel}$ = Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 64.4 tCO₂e</p> <p>B_y is determined as per equation 2 of AMS-I.E version 12 as follows:</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>$BC_{BL,HH,y}$ = 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 biomass per household in the pre-project devices during the project activity, tonnes/household/year.</p> <p>Average annual consumption of woody biomass per household before the start of the project activity, tonnes/household/year ($BC_{BL,HH,y}$) is determined as per</p>

baseline survey and if pre-project device is continue to be use $BC_{PJ,HH,y}$ to be monitored and considered accordingly. Number of households in the project activity (N_{HH}) shall be monitored and reported accordingly.

Parameter	Updated PDD Value				VVB assessment
N_{HH}	2m ³	3m ³	4m ³	6m ³	The number of biogas plants considered number of households as individual system represents individual household. The numbers are as per project database /03/. Actual operational number of households are monitored as per survey /05/ which reported 79 samples out of 85 sampled bio-digesters are in operation during the monitoring period. VVB found 12 operational bio-digester out of 14 sample bio-digesters are in operation. The non-operational period found outside the monitoring period which is confirmed during onsite visit /12/ and maintenance records /06/. Hence, PD's reported value is correct.
	Madhya Pradesh				
	6,153	3,796	240	8	
	Bihar				
	750	87	3	0	
	Jharkhand				
	1603	55	0	0	
$BC_{BL,HH,Y}$	State		Tonnes/HH/year		The baseline fire-wood consumption is as per registered RCP PDD /09/ and validation report /09/.
	Madhya Pradesh		3.93		
	Bihar		4.46		
	Jharkhand		3.87		
$BC_{PJ,HH,y}$	State		tonnes/HH/year		As per survey /05/, some samples reported fire-wood consumption during the monitoring period. PD has accordingly converted the same for the entire population with the same rate which is conservative. The verification team found the reported values are consistent with survey report /05/ and survey forms. Hence, PD's record and result is conservative.
	Madhya Pradesh		0.33		
	Bihar		0.90		
	Jharkhand		0.26		

f_{NRB} is calculated for each project region (state) following guideline outlined in 'methodological tool 'calculation of the fraction of non-renewable biomass' version 1.0 and below are the results as validated in the validation report /09/.

	<p>86.4% for Madhya Pradesh 87.6% for Jharkhand 97.4% for Bihar</p> <p>Accordingly, total Baseline emissions for entire plants achieved is 17,948 tCO₂e. Baseline emissions is calculated for only 6 months (11/08/2022 to 06/02/2023) since the renewal of crediting period was done on 11/08/2022.</p> <p>VVB confirms that baseline emissions have been appropriately calculated /02-c/ and are consistent with on-site assessment /12/, the applied methodology /B05/ and registered RCP PDD /09/.</p>
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E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>Project emissions is zero as per registered RCP PDD /09/.</p> <p>CCIPL confirms that project emissions have been appropriately calculated and are consistent with on-site assessment /12/, the applied methodology /B05/ and registered RCP PDD /09/.</p>

E.8.3. Calculation of leakage GHG emissions

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>The Net to Gross Leakage Adjustment Factor has been included in the emission reduction calculations applying adjustment factor 0.95 as per paragraph 39 of the applied methodology. So, the actual leakage emission would be 5% of baseline emission. The leakage emissions during the monitoring period is 897 tCO₂e.</p> <p>CCIPL confirms that leakage emissions are accounted corrected in the estimation of emission reduction as per the applied methodology.</p>

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>The emission reductions in this monitoring period are: $ER_y = BE_y - PE_y - LE_y$ Where, ER_y is the total emission reductions of the project activity during the year y in tCO₂e; BE_y is the baseline emissions for the project activity during the year y in tCO₂e; PE_y is the emissions for the project activity during the year y in tCO₂e; LE_y is the leakage emissions for the project activity during the year y in tCO₂e.</p> <p>As explained in section E.8.1 above, the resulted Baseline emissions (BE_y) for the monitoring period is 17,948 tCO₂. Similarly, as explained in section E.8.2 and section E.8.3 project emission is zero for the monitoring period and leakage emissions are accounted considering an adjustment factor 0.95 (multiplying with BE_y) i.e., 5% of the BE_y.</p> <p>Therefore, resulted emission reduction for the monitoring period i.e., 07/02/2022 to 06/02/2023 is 17,051 tCO₂e (rounddown value). However, PD has calculated the emission reduction for 6 months since the renewal of the project was done on 11th August 2022 .</p>

	The data presented in the monitoring report /01-e/ and emission reduction worksheet /02-c/ were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidence were presented and verified by CCIPL for the reported emission reductions as listed above.
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E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered RCP PDD

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>The emission reductions from the project for the monitoring period as reported in the monitoring report revision 3.2 of 02/01/2024 /01-e/ is equivalent to 17,051 tCO₂e as against estimated 41,877 tCO₂e. The difference is due to consumption of some firewood during the monitoring period by some users in pre-project device as well as RCP is delayed by 6 months i.e., started from 11th August 2022 so PD has claimed ERs from 11th August 2022.</p> <p>The emission reduction calculations provided in the spreadsheet /02/ have been verified to be correct and in line with the final PDD /09/.</p>

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	Desk Review and Interviews
Findings	No finding raised.
Conclusion	<p>The emission reduction achieved during the monitoring period compared to estimated value is 41,877 tCO₂ less which is due consumption of some firewood during the monitoring period by some users in pre-project device and less operational percentage of bio-digesters. Along with it, there is delay in doing RCP and it is done on 11th August 2022. Hence, PD has claimed ERs from 11th August 2022 which leads to difference in estimated and actual ERs.</p> <p>The emission reduction calculations provided in the spreadsheet /02-c/ have been verified to be correct and in line with the registered RCP PDD /09/.</p>

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	Desk Review and Interviews													
Findings	No finding raised.													
Conclusion	<table border="1" style="width: 100%;"> <tr> <td>GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012</td> <td>GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards</td> </tr> <tr> <td>NA</td> <td>17,051 tCO₂e</td> </tr> <tr> <td colspan="2">Year-wise breakup of emission reductions:</td> </tr> <tr> <td>Year</td> <td>Emission Reductions (tCO₂e)</td> </tr> <tr> <td>07/02/2022 (claimed from 11/08/2022) to 31/12/2022</td> <td>13,563</td> </tr> <tr> <td>01/01/2023 to 06/02/2023</td> <td>3,488</td> </tr> </table> <p>The emission reduction calculations provided in the spreadsheet /02-c/ have been verified to be correct and in line with the final RCP PDD /09/, also the values are consistently reported in the MR for this monitoring period.</p>		GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards	NA	17,051 tCO ₂ e	Year-wise breakup of emission reductions:		Year	Emission Reductions (tCO ₂ e)	07/02/2022 (claimed from 11/08/2022) to 31/12/2022	13,563	01/01/2023 to 06/02/2023	3,488
GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards													
NA	17,051 tCO ₂ e													
Year-wise breakup of emission reductions:														
Year	Emission Reductions (tCO ₂ e)													
07/02/2022 (claimed from 11/08/2022) to 31/12/2022	13,563													
01/01/2023 to 06/02/2023	3,488													

E.9. Assessment of reported sustainable development co-benefits

Means of verification	Desk Review and Interviews					
Findings	CL 02 is raised and closed satisfactorily. Please refer appendix 4 for further details.					
Conclusion	<table border="1" style="width: 100%;"> <tr> <td>Data variable</td> <td>Source of Data</td> <td>Reported value for the project period</td> </tr> </table>			Data variable	Source of Data	Reported value for the project period
Data variable	Source of Data	Reported value for the project period				

	Improvement in health and decrease in illnesses (SDG 3)	Survey report /05, 12/	Qualitative based survey. Average 97.46% responded positively on cleaner air quality and decrease in smoke related health issues.
	Assessment		
	As per third party survey the sample end users reported positive feedback related to health and illness compared to baseline scenario. The monitoring procedure is as per registered monitoring plan and verification team also interviewed end users who confirmed positive feedback related to health and illness.		
	Data variable	Source of Data	Reported value for the project period
	Quantitative employment and Income Generation (SDG 8)	Project developers record /13/	Employees recruited as part of the project activity is retained during the monitoring period. 8 people were recruited for the project management.
	Assessment		
	Employment records and payment proofs confirms employment generation due to the project activity /13/. This is in consistent with previous verification report /08/. The employees are still retained for the project activity.		
	Data variable	Source of Data	Reported value for the project period
	Access to affordable and clean energy services (SDG 7)	Project developers record /03/, /12/.	11,793 (~93%) Bio-digesters (Biogas System) were operational.
	Assessment		
In line with the monitoring plan, 11,793 project biogas systems are operational during the monitoring period. As per third party survey 11,793 out of 12,695 project biogas systems are in operation. Hence, 11,793 project users are accessed to affordable and clean energy services.			
VVB confirms that monitoring of all the sustainable development monitoring parameters during this monitoring period is in line with the SD monitoring plan and are consistent with site visit /12/ observations.			

E.10. Global stakeholder consultation

Means of verification	Not Applicable
Findings	Not Applicable.
Conclusion	Not Applicable.

SECTION F. Internal quality control

>>

The final verification report passed a technical review before being submitted to the client for forward submission to GS. A technical reviewer qualified in accordance with CCIPL’s qualification scheme for CDM validation and verification performed the technical review.

SECTION G. Verification opinion

>>

Carbon Check (India) Private Ltd. (CCIPL) has performed the 6th periodic verification of the GS Project Activity “Domestic Biogas Project for rural households in India” in India having GS reference number GS 6275.

The verification team assigned by the VVB concludes that the project activity as described in the registered RCP PDD (version 4.0; dated 16/10/2022) /09/ and the monitoring report (version 3.2 dated 02/01/2024) /01-e/, meets all relevant GS4GG requirements for project activity. The verification has been conducted in-line with the GS4GG principle & requirements (version 1.2) /B01-a/ and GS4GG Validation and Verification standard (version 1.0) /B01-b/.

Verification methodology and process:

The verification team confirms the contractual relationship signed on 17/05/2023 between the VVB, Carbon Check (India) Private Ltd. and Project Participants (Value Network Ventures Advisory Services Pte. Ltd.). The team assigned to the verification meets the CCIPL’s internal procedures including the UNFCCC requirements for the team composition and competence. The verification team has conducted thorough review as per GS4GG, and CCIPL’s procedures and requirements.

The verification has been performed as per the requirements described in the GS4GG principles & requirements /B01/ and constitutes the review and completion of the following steps:

- Reviewing the registered RCP PDD (version 4.0; dated 16/10/2022) /09/;
- Receipt of the MR (initial version 1.0 dated 16/05/2022 /01-a/ and final version 3.2 of 02/01/2024) /01-e/;
- Desk review of the MR /01-e/ and other relevant documents;
- Review of the applied monitoring methodology (AMS-I.E, version 12) /B05/;
- Review of any CMP and EB decisions, clarifications and guidance;
- On-site assessment (10/07/2023 to 15/07/2023);
- Resolution of CARs and CLs raised during verification;
- Issuance of Verification Report

The project activity was correctly implemented according to the selected monitoring methodology and registered PDD /09/. Through document review and on-site visit assessment, the verification team confirms that the project activity has resulted in 17,051 tCO₂e emission reductions during this sixth monitoring period.

The break-up of emission reduction from 07/02/2022 (claimed from 11/08/2022) to 06/02/2022 is verified during the course of verification are as below:

Vintage	Emission reductions (tCO ₂ e)
07/02/2022 (claimed from 11/08/2022) to 31/12/2022	13,563.32 ≈ 13,563 tCO ₂ e
01/01/2023 to 06/02/2023	3,487.71 ≈ 3,488 tCO ₂ e

CCIPL therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION H. Certification statement

>>

It is CCIPL’s opinion that the GHG emission reductions stated in the monitoring report, version 3.2 dated 02/01/2024 for project activity, “Domestic Biogas Project for rural households in India” for period 07/02/2022 (Claimed from 11/08/2022) to 06/02/2023 (Inclusive of both the dates) are fairly stated. The GHG emission reductions were calculated correctly based on the approved monitoring methodology, AMS-I.E, version 12. Hence, CCIPL able to certify that the emission reductions from the project during the monitoring period 07/02/2022 to 06/02/2022 (Inclusive of both the dates) amount to 17,051 tCO₂e.

Appendix 1. Abbreviations

Abbreviations	Full texts
AKKPS	Aadivasi Khadi Avom Krishi Parishchan Sansthan
CDM	Clean Development Mechanism
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DR	Desk Review
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
EI	External individual
ER	Emission Reduction
FA	Final Approval
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GSF	Gold standard Foundation
GS4GG	Gold standard for Global Goals
I	Interview
IPCC	Intergovernmental Panel on Climate Change
IR	Internal resource
MWh	Mega Watt hours
PDD	Project Design Document
PP	Project Participant
OSV	On Site Visit
QC/QA	Quality control /Quality assurance
SS	Sectoral Scope
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Rishi K Raychoudhury

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 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			

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		

<p>Issue Date</p> <p>5th December 2023</p> <p><i>Priya Suman</i></p> <hr/> <p>Ms. Priya Suman Compliance Officer</p>	<p>Expiry Date</p> <p>31st December 2024</p> <p><i>Sanjay Agarwalla</i></p> <hr/> <p>Mr. Sanjay Kumar Agarwalla Technical Director</p>
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Revision History of the document:

Revision date	Summary of changes
2022	Initial Adoption
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. Amit Anand

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:

- Validator
- Verifier
- Team Leader
- Technical Expert
- Technical Reviewer
- Health Expert
- Gender Expert
- Plastic Waste Expert
- CCB Expert
- Legal Expert
- Financial Expert
- Environmental, Health and Safety financial matters
- SDG+
- Social no-harm(S+)
- Environment no-harm(E+)
- Local Expert for India and RSA

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
- TA 16.1

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

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



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Kiran KV

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 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 checked="" type="checkbox"/> TA 13.1 | <input checked="" type="checkbox"/> TA 13.2 |
| <input checked="" type="checkbox"/> TA 14.1 | <input checked="" 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	Initial Adoption
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

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

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwala

Mr. Sanjay Kumar Agarwala
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.

No.	Author	Title	References to the document	Provider
01	VNV Advisory Services	a) Initial Monitoring report for the project activity. b) Revised Monitoring report for the project activity. c) Revised Monitoring report for the project activity. d) Revised Monitoring report for the project activity e) Final Monitoring report for the project activity	Version 1.0, dated-18/04/2023. version 2.0, dated- 22/08/2023. version 2.1, dated- 03/11/2023 version 3.1, dated- 21/12/2023 version 3.2, dated- 02/01/2024	PD
02	VNV Advisory Services	a) Initial ER calculation spreadsheet for the project activity. b) Revised ER calculation spreadsheet for the project activity c) Final ER calculation spreadsheet for the project activity.	Version 01, Dated-11/07/2023. version 2.0, Dated- 03/11/2023. version 3.0, Dated- 21/12/2023.	PD
03	AKKPS	Bio-digester database		
04	VNV Advisory Services	SDG Impact tool		PD
05	VNV Advisory Services	Monitoring survey records		
06	AKKPS	Grievance & Maintenance records		
07	VNV Advisory Services & AKKPS	Agreement for transaction of carbon credit	Agreement dated 23/09/2017	
08	VNV Advisory Services	Previous MP monitoring report and verification report		
09	VNV Advisory Services	Registered RCP PDD & Validation report for the project activity	Version 4.0, 16/10/2022	
10	CC IPL	Contract between CC IPL & Client	17/05/2023	
11	VNV Advisory Services	Project start date		
12	CC IPL	Onsite audit records		
13	AKKPS	Employment Records		
14	AKKPS	Agreement between AKKPS & BSC		
15	VNV Advisory Services	Evidence for randomness of sample taken		

Background Documents

No.	Author	Title	References to the document	Provider
/B01/	GS4GG	a) GS4GG "Principles & Requirements", version 1.2 b) GS4GG "Validation and Verification standard", version 1.0	www.goldstandard.org	Publicly Available
/B02/	GS4GG	Gold Standard and Site visit and remote audit requirements & procedures v2.0	www.goldstandard.org	Publicly Available
/B03/	GS4GG	GS Monitoring Template v1.1	www.goldstandard.org	Publicly Available
/B04/	GS4GG	GS Community Activity Requirements v1.2	www.goldstandard.org	Publicly Available
/B05/	UNFCCC	Small-scale Methodology AMS-I.E 'Switch from non-renewable biomass for thermal applications by the user', version 12	http://cdm.unfccc.int/	Publicly available
/B06/	Web sites	Websites: http://cdm.unfccc.int/ http://www.ipcc-nggip.iges.or.jp/ http://www.pciaonline.org/testing http://circodu.org.ug/		Publicly Available
/B07/	UNFCCC	Guidelines: Sampling and surveys for CDM project activities and programmes of activities (version 04.0)	http://cdm.unfccc.int/	Publicly Available
/B08/	UNFCCC	Standard: Standard for sampling and surveys for CDM project activities and Programme of Activities (version 09.0)	http://cdm.unfccc.int/	Publicly Available
/B09/	UNFCCC	Guideline: Application of materiality in verifications, Version 02.0	www.goldstandard.org	Publicly Available

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

Table 1. Remaining FAR from validation and/or previous verifications

No FAR from previous verification.

FAR ID	xx	Section no.	E.2	Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.	E.1	Date: 24/07/2023
Description of CL				
<i>PD is requested to provide the evidence for start date of the project activity.</i>				
Project participant response				Date: 22/08/2023
The project involves biogas plants that were commissioned from 7 th February 2017 onwards in the states of Madhya Pradesh, Jharkhand and Bihar which is the start date of the project. The project was design certified on 17 th July 2018 by GS Sustaincert. This information is provided in section A1 of the MR and section A1 of PDD. The validation of this project was already carried out during initial registration with Sustaincert and further revalidated during renewal (RCP-2) in 2022.				
Documentation provided by project participant				
PDD version 4.0 and MR version 2.0 and copies of plant completion certificate.				
VVB assessment				Date: 08/09/2023
<i>PD has submitted updated PDD (RCP PDD) and plant completion certificate. However, the plant completion certificate submitted by PD doesn't contain the start date of project activity. PD is requested to submit plant commissioned certificate with respect to start date of project activity i.e., 07/02/2017. Hence, CL is open.</i>				
Project participant response				Date: 20/09/2023
The project was registered with GS based on the commissioning of the biogas plants from 7 th February 2017 onwards until February 2018. The plant commissioning / functioning start date is mentioned in the completion certificates and in the project database.				
Please note that based on the submission of PDD, the project was already validated during initial registration with Sustaincert and further revalidated during the renewal crediting period (RCP-2) in 2022 which elucidates that biogas plants that were commissioned from 7 th February 2017 onwards in the states of Madhya Pradesh, Jharkhand and Bihar.				
Documentation provided by project participant				
Completion/commissioning certificate of plants.				
VVB assessment				Date: 04/10/2023
<i>PD has provided the commissioning certificate of the biogas plant "MPB/US/GH/1250/AKKPS/F7/110" for the start date of the project activity which was commissioned on 07/02/2017. Hence, CL is closed.</i>				

CL ID	02	Section no.	E.6.2	Date: 24/07/2023
Description of CL				
<i>PD is requested to provide evidence for contribution of project activity in all claimed United Nation SDGs.</i>				
Project participant response				Date: 22/08/2023
As mentioned in section E2 and E4 of the MR, the SDG contribution from this project is as follow:				
SDG 13 (Climate Action) – Reduction in greenhouse gas emission (CO ₂) due to replacement of fuel wood with biogas (methane) produced from the biodigester. The achieved net reduction is 17,875 tCO ₂ for which calculation is already provided as per the applied methodology.				
SDG 7 (Affordable and Clean Energy): Based on the survey it is estimated that out of 12,695 biogas plants, 11,798 (92.94%) plants were operational for this monitoring period. Hence, 11,798 plants accessed to the				

<p>affordable and clean energy. Few samples have been audited by VVB as part of on-site audit for the operational status of the plants. In addition, survey report forms are submitted to confirm the claim.</p> <p>SDG 3 (Good Health and Wellbeing): Based on the survey, 12,373 households (97.46 %) responded positively for the improvement in health and reduction in illness. Some users commented as Don't Know/No idea, however all users informed that there is reduction in indoor air pollution. The use of biogas as cooking fuel is clean energy, thus no smoke emission from the cooking. Hence, cooking food using biogas have health benefits.</p> <p>SDG 8 (Decent Work and Economic Growth): The carbon financing for this project has helped to engage local persons as technicians for the maintenance and service of the biogas plants.</p>
<p>Documentation provided by project participant</p> <p>Updated MR version 2.0, Employment enrolment with AKKPS, Salary receipt to technicians.</p>
<p>VVB assessment Date: 08/09/2023</p> <p><i>PD has submitted ER sheet as evidence for contribution of SDG 3, 7 & 13 along with SDG impact tool. Also, PP has submitted employment records and salary slip for person employed due to the project activity during current MP. Hence, CL is closed.</i></p>

CL ID	03	Section no.	E.6.3	Date: 24/07/2023
Description of CL				
<p>1) <i>In monitoring report and in survey report for this MP, PD is mentioned Biogas plant no. "MPB/BGT/LA/1140/AKKPS/E7/498" is not operational during survey whereas during onsite visit household said that it is operational throughout the monitoring period. PD is requested to clarify.</i></p> <p>2) <i>In the monitoring survey report for the MP, PD has not mentioned the name of the person interviewed during monitoring survey instead PD has mentioned Biogas owner's name in which some of them don't exist anymore. Therefore, VVB could not verify the person interviewed by PD during the on-site assessment. PD is requested to clarify and provide an action plan to meet the requirement.</i></p> <p>3) <i>The database submitted by PD for biogas plants doesn't contain phone numbers, proper address and geo-coordinates of the HH to prevent the double counting. PD is requested to clarify how no double counting has been ensured noting that other similar projects under several GHG programs are active in the region.</i></p>				
Project participant response				Date: 22/08/2023
<p>1. For sample ID: MPB/BGT/LA/1140/AKKPS/E7/498 in Madhya Pradesh, the plant was not working due to certain fault/malfunction on the day of survey. The non-operational status of the plant is mentioned in the survey report. Afterward, the Biogas Service Center technician carried out necessary servicing / maintenance of the system and make it operational. Since, the plant was observed non-operational at the time of survey during the monitoring period, this plant has been excluded from the operational status list.</p> <p>2. An onsite survey of the biogas plant samples were carried out during the survey period in January 2023. The survey questions were asked to the household personnel (mostly biogas owners) at the time of survey. Where biogas owners were not available for interview, the available family members of the household were interviewed during the survey. To avoid confusions in household naming, the name of the household representative as per the project database has been maintained in the survey. However, in future this will be taken care and person interviewed shall also be recorded along with the biogas owner name.</p> <p>3. The biogas plants under this project was commissioned from 7th February 2017 and the project was design certified on 17th July 2018 by GS Sutaincert. At that time, each household biogas plant under this project was provided with unique identification numbers (plant ID) to prevent double counting. The plant identification number is provided in the project database and also at the biogas system. Further, an agreement is made between household and the AKKPS for the carbon credit right transfer (point no. 6) where it is mentioned households shall not participate in other carbon offset projects during the project period.</p>				
Documentation provided by project participant				
Copy of survey forms, Site photos with Plant ID, Project database, Copy of Carbon credit transfer.				

VVB assessment	Date: 08/09/2023
<p>1) PD has taken conservative approach and removed the above-mentioned sample from operational list which is not operational on the day of survey whereas found operational by VVT on day of OSV. Hence, CL is closed.</p> <p>2) PD has mentioned that to avoid confusion plant owners name was mentioned in monitoring survey even though family members were interviewed during monitoring survey. However, PD has mentioned that in future PP will record name of person interviewed along with biogas plant owners' name. Hence, CL is closed.</p> <p>3) PD has provided unique ID to every biogas plants along with PD has signed carbon credit right transfer agreement with biogas plant owners which prevent participation of other carbon projects during project period. However, in future PP is requested to take geo-coordinates and phone no. of biogas plant owners to further enhancing and prevention of double counting. Hence, CL is closed.</p>	

CL ID	04	Section no.	E.5	Date: 24/07/2023
Description of CL				
<p>1) As stated in section B.1 of the MR, AKKPS maintain a registry of issues reported by field co-ordinators. PD is requested to provide the copy of the register of all the samples interviewed by PD for the monitoring period.</p> <p>2) PD is requested to provide supporting documents to substantiate the values given in the third party survey report (Survey forms, raw input of survey result, survey team of all the households interviewed by PD)</p>				

Project participant response	Date: 22/08/2023
<p>The field coordinators / technicians carry out periodic visit of the biogas plants to check operational status of the system and also attend the biogas system on call from the household for maintenance. Each household is provided contact numbers of the Biogas maintenance technician so they can call the technician whenever there is fault in the biogas system. A log is maintained in the service card and also logged in the register for record.</p>	

Documentation provided by project participant
Biogas service card, Service register, Grievance Register

VVB assessment	Date: 08/09/2023
<p>1) PD has submitted grievance logbook for the current MP in which 5 grievances are enrolled. PD has also provided service logbook of biogas plants. Hence CL is closed.</p> <p>2) PD has not responded neither submitted above requested documents. Hence, CL is open.</p>	

Project participant response	Date: 20/09/2023
<p>The supporting document of the survey report such as survey forms, survey data ad survey team is enclosed.</p>	

Documentation provided by project participant
Survey forms, survey data and survey team.

VVB assessment	Date: 04/10/2023
<p>PD has submitted monitoring survey form with beneficiary response along with list of monitoring survey team. Hence, CL is closed.</p>	

CL ID	05	Section no.	E.8.2	Date: 24/07/2023
Description of CL				
<p>In section E.1 of the MR, PD has obtained value of "average firewood consumption after project activity (ton/HH/year) for Madhya Pradesh, Bihar and Jharkhand as 0.21, 0.30 and .27 respectively through monitoring survey whereas as per VVB onsite audit based on ASP the value of "average firewood consumption after project activity (ton/HH/year) for Madhya Pradesh, Bihar and Jharkhand is found to be 0.33, 0.90 and 0.26 respectively. Since the value obtained during VVB OSV for Madhya Pradesh and Bihar PP is more conservative than the value obtained by PD through monitoring survey. PD is requested to clarify how the conservativeness in the value is applied.</p>				
Project participant response	Date: 22/08/2023			
<p>The average fuelwood consumption in the state of Madhya Pradesh, Bihar and Jharkhand is 0.21, 0.30 and 0.27 respectively as per the data collected during survey. This is the mean value of fuelwood consumption for 68 samples of Madhya Pradesh, 6 samples of Bihar and 11 samples of Jharkhand. While in survey, household representative is interviewed with questions such as average fuel wood consumption, season in which more fuel wood is consumed, or while the plant does not function. Since In the VVB site audit, the VVB considered 8 samples for Madhya Pradesh, 2 samples in Bihar and 4 samples Jharkhand.</p>				

The results of the surveyed samples and audit samples vary slightly since the number of surveyed samples are more compared to audit samples. Further, data collected on firewood consumption is based on the interview of the household at the time of survey.	
Documentation provided by project participant	
Survey Report	
VVB assessment	Date: 08/09/2023
<i>VVB has conducted the acceptance sampling on the basis of the monitoring survey conducted by the PD. The audit samples are the representative of the monitoring survey samples. Hence, any deviation observed in the monitoring survey result during OSV audit shall be attributed to complete population. The deviation observed in MP and Bihar during OSV is much more than the acceptance threshold. Hence, PD should clarify how the considered data of firewood consumption still holds good. Hence, CL is open.</i>	
Project participant response	Date: 20/09/2023
The value obtained for the firewood consumption is based on the interview with the household representative which is a qualitative data. Quantitative measurement using weigh machine was not carried out either during survey or during the OSV by VVB. There can be some variation in informing the quantity of firewood consumption by the household representative. Further, some of the household member at the time survey and OSV were not the same person as some of them went to agricultural field during the OSV.	
Please note that at the time of survey, for example, if the household said that the firewood consumption is 80-100 kg/year, the survey team considered 100 kg /year (ie higher side) for conservative value. The data on firewood consumption for cooking is purely based on the interview/ survey questions in the randomly selected samples in Madhya Pradesh, Bihar and Jharkhand.	
It is to be noted that in all the previous survey reports also, the average annual consumption of woody biomass per household in the pre-project devices during the project activity (BCPJ,HH,y), the firewood consumption was in the range 0 – 0.34 ton/HH/Year which were verified by the VVB. Thus, our survey data is correct and is acceptable for this monitoring period.	
Documentation provided by project participant	
Survey Report, Survey data	
VVB assessment	Date: 13/10/2023
<i>The value of “average firewood consumption after project activity (ton/HH/year)” obtained from OSV through interviewing the beneficiary is conservative. Thus, PD is requested to consider the values obtained from OSV and apportion the ERs accordingly. Hence, CL is open.</i>	
Project participant response	Date: 03/11/2023
Noted VVB comments to update the firewood consumption after project activity (ton/HH/year)” obtained from OSV.	
The Emission Reduction (ER) sheet, Monitoring Report (MR) and the SDG Impact tool has been updated with considering the firewood consumption for Madhya Pradesh, Bihar and Jharkhand as 0.33, 0.90 and 0.26 respectively as advised by the VVB in the VVB assessment dated 13/10/2023.	
Documentation provided by project participant	
Updated MR version v3, ER version v2, SDG Impact tool version v2 and Modified Data_VVB Comments_`6275_GO1	
VVB assessment	Date: 15/11/2023
<i>PD has appropriately apportioned the outcome of “average firewood consumption after project activity (ton/HH/year)” from OSV in ER calculation spreadsheet. Hence, CL is closed.</i>	

CL ID	06	Section no.	E.5	Date: 08/09/2023
Description of CL				
<i>During OSV, it is observed that biogas plant no. “MP/CHI/708/AKKPS/G7/116” & “BHP/200/KKPS/E7/148” was not operational. However, the review of data base, it was observed that the same plants are considered for ER calculation. PD shall clarify what QA / QC measures have put in place to avert and handle such situation.</i>				
Project participant response				Date: 20/09/2023
Please note during the audit, the household representative informed that these plants were operational during this 6 th monitoring period (February 2022 – February 2023) as witnessed by the VVB team. As the household informed that these plants were not operational for last few months which was due to household family problem (example sickness, marriage etc). These plants were under necessary maintenance by the team appointed by AKKPS.				
Since these plants were operational for the entire monitoring period (MP6: February 2022 – February 2023), thus these samples were considered for the ER.				

Documentation provided by project participant	
Maintenance log sheet, survey report	
VVB assessment	Date: 13/10/2023
<i>VVB has conducted OSV as per sampling standard having sample size (n) 14 with acceptance number (c) 0. Thus, PD is requested apply reasonable adjustment for 2 non-operational samples out of 14 in ER calculation, as per para. 36 of Sampling Standard v4.0 and revise the ERs. Hence, CL is open.</i>	
Project participant response	Date: 03/11/2023
<p>The biogas plant no. "MP/CHI/708/AKKPS/G7/116" & "BHP/200/KKPS/E7/148" were operational during the monitoring period (February 2022 – February 2023). The survey report also indicate that these plants were operational, and evidence of maintenance record was shared with VVB. During the audit also, the household representative informed that these plants were operational during this monitoring period and was witnessed by the VVB.</p> <p>However, VVB has advised to consider these two plants as non-operational in the ER calculation sheet. Thus, ER has been updated and accordingly, MR and SDG Impact tool has been revised.</p>	
Documentation provided by project participant	
Updated MR version v3, ER version v2, SDG Impact tool version v2 and Modified Data_VVB Comments `6275_GO1	
VVB assessment	Date: 15/11/2023
<i>PD has not appropriately apportioned the outcome of OSV for parameter "Number of households (biogas system) in the project activity in operational per year (N_{HH,y})" in ER calculation spreadsheet. Hence, CL is open.</i>	
Project participant response	Date: 21/12/2023
<p>A meeting was convened between the VVB team and VNV Advisory Services on 8th December 2023 to discuss the DVR clarifications regarding the operational status of the biogas plants. Based on the discussion, VVB advised VNV Advisory Services to share additional evidence to confirm that the two plants (MP/CHI/708/AKKPS/G7/116 and BHP/200/KKPS/E7/148) were operational during the monitoring period (February 2022 – February 2023).</p> <p>The maintenance record of the biogas plants logged in the biogas service card indicates that both the biogas plants were operational during the monitoring period. Thus, these two plants were operational for this monitoring period and accordingly ER sheet has been revised. Following the revision of the ER sheet, MR and SDG impact tool has been updated for this monitoring period.</p>	
Documentation provided by project participant	
Biogas Service Card, Updated MR version v3.1, ER version v3 and SDG Impact tool version v3	
VVB assessment	Date: 22/12/2023
<i>PD has provided additional documents i.e., service card (maintenance record) which establish that two biogas plants mentioned above were operational during monitoring period. The House replied the same during onsite visit. PD has apportioned the ER appropriately. Hence, CL is closed.</i>	

Table 3. CAR from this verification

CAR ID	01	Section no.	E.5	Date: 24/07/2023
Description of CAR				
<i>Applied Methodology AMS-I.E, Version no. mentioned in the MR is not as per RCP PDD. PD is requested to rectify the same.</i>				
Project participant response				Date: 22/08/2023
Applied Methodology AMS-I.E, Version no. has been updated in the relevant sections as AMS-I.E, Version no. 12.				
Documentation provided by project participant				
Updated MR report version 2.0				
VVB assessment				Date: 08/09/2023
<i>PD has rectified the version of applied methodology as per RCP PDD throughout the revised MR. Hence, CAR is closed.</i>				
CAR ID	02	Section no.	E.6.2	Date: 24/07/2023
Description of CAR				
<i>The value mentioned for annual consumption of wood per household per year for Jharkhand in section D.3 of the MR is erroneous. PD is requested to rectify the same.</i>				
Project participant response				Date: 22/08/2023

Annual fuel wood consumption for the Jharkhand state has been corrected as 0.27 tonne/HH/year.	
Documentation provided by project participant	
Updated MR report version 2.0	
VVB assessment	Date: 08/09/2023
<i>PD has made the necessary changes in section D.3 of MR. Hence, CAR is closed.</i>	

Table 4. FAR from this verification

FAR ID	xx	Section No.		Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				Date: DD/MM/YYYY