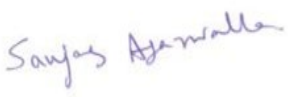
Verification and certification report form for Project Activity	
BASIC INFORMATION	
Title and GS reference number of the project activity (PA)	Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh (GS 12114)
Version number(s) of the PDD(s) to which this report applies	Version 4.1 Dated 14/03/2024
Version number of the verification and certification report	03
Completion date of the verification and certification report	15/03/2024
Monitoring period number and duration of this morning period	First Monitoring Period 14/09/2022 – 13/09/2023 (both days inclusive)
Version number of the monitoring report to which this report applies	Version 3.1 Dated 14/03/2024
Activity Requirements applied	Community Services Activities
Product Requirements applied	GHG Emission Reduction & Sequestration
Project Proponent	Value Network Ventures Advisory Services Pte Ltd. (VNV)
Host Country	Republic of Bangladesh
Applied methodologies and standardized baselines	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 04.0
Mandatory sectoral scopes	3: Energy demand
Conditional sectoral scopes, if applicable	Not applicable
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	 Sanjay Kumar Agarwalla, Technical Director

SECTION A. Executive summary

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Introduction:

Carbon Check (India) Private Ltd. (CCIPL) is performing the first periodic verification of the GS project "Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh" (GS project id: GS 12114) for the period 14/09/2022 – 13/09/2023 (inclusive of both the dates). The project activity involves dissemination of high efficiency ICSs (technology/measure) to replace the existing traditional (wood-fuel) cookstoves/three stone fires in beneficiary households of Rohingya Refugees, Host and/or Other Marginalized Communities in Bangladesh.

According to the PDD /B03/ & MR /01/, the project activity aims to contribute to the achievement of the Sustainable Development Goals (SDGs) by distribution of Improved Cookstoves (ICS) in the households of Rohingya Refugees, Host and/or Other Marginalized Communities in Bangladesh. The objective of this project activity is to replace the commonly used inefficient wood-fired stove technology/ three stove fires with an efficient cook stove that is both clean and sustainable.

This report summarises the findings of the first periodic verification of the project, performed on the basis of GS4GG principles & requirements version 1.2, Community services activity requirements version 1.2, GS4GG Validation and Verification standard version 1.0, as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the Gold Standard.

Objective:

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 registered GS4GG project during a defined monitoring period. Verification is required for all GS project activities intending to confirm their achieved emission reductions and proceed with request for issuance of VERs.

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 "Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh" for the period 14/09/2022 – 13/09/2023 (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 used to confirm the reductions in anthropogenic emissions by sources, is accurate, sufficient, definitive and presented in a concise and transparent manner.

This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions. In particular, the monitoring plan, monitoring report and the project's compliance with relevant GS and host party criteria have been 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 in the PDD. It is also confirmed that the monitoring plan is in compliance with the PDD/B03/ and the approved monitoring methodology/B02/ and the emission reductions achieved during the monitoring period are real and measurable, and accurate.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the PDD/B03/.
- To verify the implemented monitoring plan with the registered/included PDD and applied baseline and monitoring methodology/B02/.
- 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/ covering the monitoring period from 14/09/2022 – 13/09/2023 (both days inclusive) and based on the PDD governing /B03/the monitoring plan, emission reduction calculation spreadsheet /02/, monitoring methodology and all related evidence provided by project participant.

Conclusion

The verification team assigned by the VVB concludes that the monitoring report (Version 3.0, dated: 02/03/2024) /01/, meet all relevant requirements of the GS4GG requirements /B01/ and GS VVS Version 01.0 /B01/.

The project has been correctly implemented according to selected monitoring methodology, monitoring plan and the PDD/B03/. The monitoring system was implemented, maintained in a proper manner, while collected monitoring data allowed for the objective 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 (tCO_2e)**
14/09/2022– 31/12/2022	12,411
01/01/2023– 13/09/2023	195,042
Total for the monitoring period	**207,453**

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

SECTION B. Verification team

B.1. Verification team, technical reviewer, and approver

Carbon Check (India) Private Ltd. has appointed a competent team as per the UNFCCC Accreditation Standard, GS4GG requirements and CCIPL's internal procedures. Further details regarding team competence can be found in Appendix 2. The team is outlined below:

No.	Role	Type of resource	Last name	First name	Affiliation	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader / Technical Expert	IR	Gedam	Pallavi Ganesh	CCIPL	X	-	-	X
2.	Team Member/ Local Expert	IR	Halder	Manas	CCIPL	X	X	X	X
3.	Trainee Assessor	IR	Ghosh	Tarpan	CCIPL	X	X	X	X

No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer	IR	C.	Indumathi	CCIPL
2.	Approver	IR	Agarwalla	Sanjay Kumar	CCIPL

Audit Team Experience:
The team composition is linked to the methodology and local experience in the host country.
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) PDD 001 to PDD 023, GS7776 PoA (GS 10716 (PDD 01), GS 916 PoA (GS5417 (PDD 12) GS 5418 (PDD 13).

Manas Halder: He is an appointed Team Member and Technical Expert for technical areas 1.1, 3.1 and 13.1. He is a qualified lead auditor for GHG offset projects validations and verifications and has actively been involved in the validation and verification of more than 40 GHG offset projects with SDG component. He is having nearly 3 years of relevant work experience. He carried out audits for climate change mitigation projects under different carbon credit mechanisms (CDM, GS, VCS, GCC, etc.) for various sectors like renewable energy (solar, wind, hydro, biomass), energy efficiency (cook stoves) and waste to energy (biogas).

Tarpan Ghosh: He is qualified as Trainee Assessor in Carbon Check. He holds a Master of Business Administration degree in Energy Management from Indian Institute of Social Welfare and Business Management, Calcutta University, Kolkata

Indumathi C: She is an appointed technical reviewer 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. Application of materiality in conducting the verification

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 input data in the ER spreadsheet including sales database, determination of parameter for efficiency testing including data calculation. This includes all the parameters to be monitored ex-post as per the PDDs /B04/.	The risk was mitigated by the training of the personnel involved in the data capture, calculation and by following the monitoring responsibilities. The training records/16/ were reviewed which were also confirmed during the on-site visit interviews. Verification team, based on the above, confirms that the risk is appropriately mitigated.
2.	Information System: Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Medium	The data is recorded in the spreadsheets based on the raw data collected during the field visits. The access to the spreadsheets for calculation of ERs, monitoring and sales database and Stove efficiency testing records is controlled.	The identified risk was mitigated by managing access to the records. It was confirmed through interviews that the raw data is collected by the field personnel and then transmitted and stored electronically to the PP's office. The data quality control is maintained by the PP.
3.	Accuracy of the measuring equipment	Low	Check the calibration records for the measurement equipment used for efficiency test and the project KPT.	The risk due to accuracy of the measuring equipment was ensured by planning to check calibration certificates of the measuring equipment used for stove efficiency

				(water boiling tests) and the project KPT.
4.	Competence of personnel involved in conducting standardized tests viz., KPT	Medium	Interview of the personnel involved and check the training records / accreditation certificates (applicable in case of institutions) involved in conducting such tests.	The risk was mitigated by reviewing the training records of the personnel involved in the conducting such tests and by following the monitoring responsibilities. For institutions involved in conducting such tests their accreditation certificates were checked to establish their competence for conducting such tests. The training records and certificates were reviewed which also confirmed during the on-site interviews.
5.	Sample	Medium	Sample size is not suitable or the surveyed stoves.	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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The threshold of materiality was evaluated based on § 9.6.3 of "GS Validation and Verification Standard" Version 01.0 /B01/. It was concluded that the materiality threshold applicable to the project activity based on actual emission reductions achieved is 2% of 207,453 tCO2e which is equal to 4,149.06 tCO2e.

Based on the above, activities in which risks were assessed were:

1. Monitoring system including the data input procedure (including relevant personnel and applicable template forms used)
2. Copy of the agreement between household and Project Participant (s) (origin of data)
3. ICS unique ID system
4. ER sheet (application of data)
5. Data flow
6. Data control procedures
7. Monitoring survey records
8. Specific fuel consumption (KPT records)

In conducting the verification, VVB took cognizance of § 9.6.3 of "Validation and Verification Standard" Version 01.0 /B01/ and based on the input of data from different sources checked through sampling of records during the on-site audit. Data flow was checked through comparison of data in hand-written forms, electronic database, and ER sheet /02/. The competence of the personnel involved in conducting the stove efficiency testing (KPT), recording of data and calculation of the emission reductions data has been checked by the verification team by means of on-site interviews.

The risks identified can be mitigated through cross check with all sets of documents. The verification team performed the following checks to mitigate the effects of the above-identified sources of error:

Mitigation of Human error risks: The verification team mitigated the risk by checking the training records/16/ of the personnel and assessing their competencies, skills, monitoring / testing procedure followed, understanding of the monitoring survey form and project KPT protocol and testing procedure etc. during the on-site interviews. Further, data was crosschecked with the ER calculation spreadsheet /02/ and the raw data.

Mitigation due to error in Information system: Verification team by conducting interviews with the personnel responsible for such activities mitigated the risk due to error in information system. It was confirmed through interviews that the raw data is collected by the field personnel and then transmitted and stored electronically at PP's office. The data quality control is maintained by the PP.

Accuracy of the measuring equipment: The risk due to inaccuracy in measurements was mitigated by reviewing calibration certificates of all the project equipment.

Competence of personnel involved in conducting standardized tests viz., KPT: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the KPT. The KPT has been carried out by the well-trained personnel and training certificate of the personnel has been provided to the verification team in this respect /08/. The training content has also been provided to the verification team. The verification team based on on-site interviews and review of competency documents and training records /16/ confirms that the team was qualified to carry out the KPT in line with the protocol.

Mitigation due to error in Sampling: The verification team mitigated the risk by checking the ER sheet /02/ for the project, list of random samples /02/ generated for monitoring surveys and sample size calculation sheet /02/ and interviews with personnel responsible for the same.

In conducting the verification, VVB took cognizance of § 9.6.3 of "GS Validation and Verification Standard" Version 01.0 /B01/ and based on the input of data from different sources checked through sampling of records during the on-site audit.

Based on the assessment carried out, CCIPL confirms with a reasonable level of assurance that the claimed emission reductions are free from material errors, omissions, or misstatements.

SECTION D. Means of verification

D.1. Desk/document review

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During the desk review, the relevant monitoring records were checked. Soft copies of original survey records and project KPT records were used to cross check the consistency of information. .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 /B02/. Documents reviewed or referenced during the verification are listed in Appendix 3 of this report.

D.2. On-site inspection

The verification team has carried out physical on-site inspection and interviews in order to assess the information included in the monitoring report and monitoring measurement procedures adopted during the monitoring period. Interviews with the project end users and monitoring survey / KPTs enumerators were made.

Through the review of monitoring report /01/, PDD and validation reports, comparing the relevant evidence and interview with the PP's representatives, CCIPL has confirmed that the project is implemented in line with the PDD during the monitoring period. There is no change of the project design, operation, and monitoring plan. On-site inspection and interviews were performed by verification team to assess the following:

On-site inspection and interviews: 09/12/2023 to 11/12/2023				
No.	**Activities performed during on-site audit**	**Site location**	**Date**	**Team member**
1.	Opening Meeting and brief project description by the PP; check the project data base / sales records / end user agreement for the total number of stoves distributed under the PA.	Bangladesh	09/12/2023 to 11/12/2023	Pallavi Gedam Manas Halder Tarpan Ghosh
2.	Compliance of Monitoring plan with the applied methodology and registered monitoring plan; project implementation and operation as per the PDD.	Bangladesh	09/12/2023 to 11/12/2023	
3.	Discussion on the monitoring survey and KPT process; review of QA/QC process (such as related to instruments utilized for carrying out such standardized tests for e.g., KPT) including interview of the personnel involved and the review of training records, competency assessment (abilities, qualifications and recognition of involved personnel and institutions of the measuring team) and the review of accreditation certificates of institution responsible for conduction of survey/KPTs; Review of monitored data, Discussion on Monitoring report and ER calculation spread sheets	Bangladesh	09/12/2023 to 11/12/2023	
4.	Physical site visit (to check project implementation and operation and sample households from PP/PP's survey samples)	Bangladesh	09/12/2023 to 11/12/2023	
5.	Discussion on OSV findings and Closing meeting.	Bangladesh	09/12/2023 to 11/12/2023	

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kumar	Ritesh	Climate Secure (CSIPL)	09/12/2023 & 11/12/2023	MR preparation, GS requirements, Emission reduction calculations, methodology applicability, start date justification, Project Design, ownership details, carbon credit ownership arrangements, monitoring and reporting arrangements, QA/QC procedures, baseline assessment, Project technology etc.	Pallavi Gedam Manas Halder, Tarpan Ghosh
2.	Gupta	Mohit	Climate Secure (CSIPL)			
3	Lohia	Rohit	Climate Secure (CSIPL)			
4	Saha	Atanu Kumar	Bangladesh Bondhu Foundation (BBF)	09/12/2023 to 11/12/2023	Baseline and Monitoring survey and KPT procedures.	
5	Mridha	Ruman	Bangladesh Bondhu Foundation (BBF)	09/12/2023 to 11/12/2023		
6	Hossain	Kamrul	Bangladesh Bondhu Foundation (BBF)	09/12/2023 to 11/12/2023		
7	Barua	Rudra	Bangladesh Bondhu Foundation (BBF)	09/12/2023 to 11/12/2023		
8	Islam	Md. Hasibul	Bangladesh Bondhu Foundation (BBF)	09/12/2023 to 11/12/2023		
9	Ahamed	Mukter	Stakeholder (Local Authority representative)	10/12/2023	Local stake holder consultation	
10	Mondal	Abdul Warish	Deputy Manager, BBF Manufacturing unit,Tangail	11/12/2023	• Plant manufacturing process. • Grievance procedures in the plant • Safety measures taken in the plant	
11	Khaleq uzzaman	Dr. Engineer	Bangladesh Bondhu Foundation (BBF)	09/12/2023 & 11/12/2023	• Discussion on Programme Design and eligibility criteria • Local stake holder consultation • Description of Additionality	

					• Discussion on the GS preliminary review comments • Sustainable development Parameters • Grievance Mechanism • Proposed Technology to be used in the project activity. • PP Management System Manual • Discussion on programme funding and involvement of any ODA • Monitoring/Sampling plan	
12	Akter	Rasheda	Beneficiary (Local Authority representative)	10/12/2023	Local stake holder consultation	
13	Akter	Rima	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-UKH-RAJ-D-29225)	10/12/2023	Project Usage survey / KPTs Interview questions, not limited to, included the following: 1. Usage of project ICS, 2. Unique serial number of ICS 3. Waiver on rights of ownership of carbon credits to PP 4. usage of baseline stove parallel to project ICS, 5. household size, 6. number of meals cooked, 7. number of people served per meal, 8. types of stove / fuel in use, 9. baseline stove being used prior to project, 10. were any KPTs conducted by PP, 11. fuel savings / time savings after project intervention,	
14	Akhter	Sahina	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-UKH-RAJ-D-30433)	10/12/2023		
15	Khatun	Patan	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-UKH-KAL-D-3571)	10/12/2023		
16	Akter	Marjina	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-JHI-D-67120)	10/12/2023		
17	Yasmin	Sabina	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-COX-JHI-D-65613)	10/12/2023		

18	Akhter	Bulbul	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-COX-TEK-WHY-D-41847)	10/12/2023		
19	Begum	Nurjahan	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-COX-TEK-WHY-D-29122)	11/12/2023		
20	Akhtar	Sahena	Monitoring Survey and Project KPT Participant (Stove ID: BBF-COX-COX-TEK-WHY-D-36570)	11/12/2023		

D.4. Sampling approach

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PP has conducted project usage survey /10/, to determine the project performance parameters. As the target population is homogeneous, PP has employed representative sampling approach using 90/10 as confidence/precision. This is in line with the applied methodology /B02/. The sample size for each parameter is determined using random sampling which is in line with the PDD. Based on the requirement stated in the GS methodology TPDDTEC v4, any sampling methods can be used, provided that the sample is selected randomly.

The minimum sample size for the Project Usage Surveys was determined in line with para 4.3.3, page 43 of the applied methodology as >100 for sampling population >1000. Thus, a sample size of 125 was considered by PP, the project ICS population being >1000 units. As per the monitoring plan in the PDD, the usage survey sample end users were selected via running a random sampling generator across the ICS distribution database of the project. A total of 111 usage surveys were completed by the PP.

This random number generator results /25/ and project ICS database /07/ were verified by the verification team to confirm that the sample selection for the project usage surveys has been carried out appropriately as per random numbers generated.

Further, for PFTs, the sample size was determined as per the Kitchen Performance Test Protocol v3.0 – Appendix 3 and applied Methodology - ANNEX 2 (Complementary Guidelines) and c) para 4.4.6 of the methodology. PP applied independent (cross-sectional) sampling i.e. PFT sample households were different from BFT sample households. PP, based on its knowledge, experience and professional judgement, considered the expected detectable difference in mean as 50% and pooled CV of measurement as 0.4, yielding a sample size of 10 as per CCA KPT protocol v3.0. Appendix 3.

As per para 4.4.6 of the applied methodology minimum PFT sample size must be 30. Therefore, a sample size of 35, for PFT, was determined (including buffer to accommodate any non-responses) and the PFT samples were selected from the already randomly selected project survey samples. A total of 33, 3-day PFTs were completed by the PP. The complementary guidelines for KPT of the TPDDTEC methodology /B02/ were found to be duly followed by PP for conducting the KPTs.

As per the methodological requirement, the fuel savings achieved from baseline and project KPTs were checked with the ratio of baseline thermal efficiency established ex-ante and rated efficiency of project ICS as per manufacturer's specifications.

As per paragraph 25 of the CDM Sampling Standard, version 09 /B07/, the verification team has to verify whether the project participants or the coordinating/managing entity have implemented the sampling and surveys according to the sampling plan in the 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.

The verification team has used acceptance sampling during verification for checking the above project survey and project KPT. Considering that Bangladesh is a Least Developed Country (LDC), applying §39 (c) of the sampling standard (version 09.0) /B04/, a sample size for 8 households was chosen (with no non-responses) for the project activity. A sample size of 8 was required, based on an AQL of 0.5 % and UQL of 20 %, the producer risk used is 10 % and consumer risk used was 20 %. Acceptance number (c) thus determined for the sample is 0.

The details of the samples interviewed are listed in section C.3 (under the list of interviewed persons). No discrepancy was found between PP records and on-site observations or interview responses for any of the 8-sample household visits made by VVB team 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) /B05/. For the assessment of other SDG impact parameters, questionnaire form was prepared and used by the PP during the monitoring surveys.

The information provided in the sampling survey data/10/, has been cross checked during the on-site interviews conducted. As a part of acceptance sampling, the verification team could confirm the sampling survey data with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard "Sampling and surveys for CDM project activities and programmes of activities", version 09.0/B04/.

Verification team confirms that the end users have been selected at random and without any bias. Furthermore, based on review of the ex-post monitoring survey records /10/, the verification team confirms that the sampling survey covered end users covered in the MR. Thus, the survey design covers the region of distribution of the population (within the geographical boundary) and is representative in nature.

The verification team thus confirms that the sampling plan ensures that:
(a) The necessary confidence / precision of 90/10 each of the parameters is met.
(b) Samples are randomly selected and are representative of the population.

This has been cross verified by the verification team from the supporting documents submitted. /01/ to /24/

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

The VVB has raised 06 clarifications and 00 corrective action requests and 00 Forward action request and satisfactorily closed.

SECTION E. Verification findings

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

>> N/A

E.2. General

E.2.1. Compliance of the monitoring report with the monitoring report form

Means of verification	Document Review
Findings	-
Conclusion	PP has used the GS4GG template Monitoring Report, version 1.1 /01/. Verification team confirms that the latest available version of the monitoring report template has been used by the PP and the MR is in compliance with the monitoring report form and related template guide Monitoring Report, version 1.1 /01/. This confirms compliance with the §9.4.4 GS VVS version 01.0 /B01/and GS4GG requirements /B01/.

E.2.2. Compliance of the project implementation and operation with the project design document

Means of verification	Document Review, Interview
Findings	-
Conclusion	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 template guide of the Monitoring Report. As verified from on-site interview and survey report /10/, the audit team confirmed that the project implementation and operation complies with the project design document/B03/. The starting date of operation is 14/09/2022 (is the date distribution of first ICS under this project activity) which is confirmed from the PDD /B03/ validation report /B03/ and beneficiary agreement/04/. The Project activity distributed 125,003 ICS in beneficiary households of Rohingya Refugees, Host and/or Other Marginalized Communities in Bangladesh. The project boundary in the PDD /B03/ is in line with the actual project boundary. CCIPL confirms the project ICS are operational through on-site visit interviews with project end users. Each ICS has unique identification number as specified which has been provided in the beneficiary agreement /03/ and consistent with the information presented in the project ICS database/07/. The unique identification number is also marked at each project ICS physically. Along with the serial number, end username, address, commissioning date etc. had also been noted which were found to be consistent on ground.

	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 parameters within the control of the PP, relevant to determination of emission reductions which are within the control of the PP; no change to the scale of the project activity or applicability of baseline and monitoring methodology (TPDDTEC) version 04.0/B02/ were observed by the VVB team. The operational status of all project ICS, impact on identified SDGs from 14/09/2022 to 13/09/2023 has been taken into consideration. Verification team based on review of MR /01/ and provided evidence confirms that the households/end users relinquish their right of carbon credits. Furthermore, the ICS implemented under the project is uniquely identified /03/, thus avoiding any potential double counting. As verified through document review and on-site interviews, the project implementation and operation, all physical features of the project complies with the project design document /B03/. Verification team has checked the information in the monitoring report /01/ and compared against the PDD /B03/ and found it to be consistent. Verification team confirms that: a) The project activity is implemented as per PDD/B03/. b) The actual operation of the proposed GS project activity is in line with the PDD /B03/. c) It has reviewed 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 BBF head office at Dhaka and on-site interviews confirms that a robust and effective grievance addressal mechanism is in place and however, no grievances are reported during the monitoring period. There are no deviations or proposed or actual changes in the implementation or operation of the Project and the included PDD/B03/. In summary, the monitoring period is reasonable, and the operation of the project activity is in accordance with the PDD /B03/. This is in compliance with § 9.4.5 and 9.4.6 GS VVS version 1.0 requirements /B01/.

E.3. Post-registration changes

E.3.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents[1]

>> 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).

E.3.2. Corrections

>>Not applicable

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

>> Not applicable

E.3.4. Inclusion of a monitoring plan

>> Not applicable

E.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

E.3.6. Changes to the project design

>> Not applicable

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

>> Not applicable

E.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 is able to confirm that the monitoring plan contained in the PDD is in accordance with the approved methodology applied by the project activity, i.e., (TPDDTEC), version 04/B02/. The verification team has checked the actual monitoring plan against the monitoring plan stated in the PDD/ B03/ 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/B02/. The monitoring plan is in accordance with the approved methodology, (TPDDTEC), version 04 /B02/, applied by the project activities and as provided in the PDD /B04/. This is in compliance with § 9.4.10 GS VVS version 1.0 requirements /B01/

E.4.1. Compliance of the Project implementation with the PDD design document

Means of verification	Document Review, Interview
Findings	–
Conclusion	The implementation status of the Project activity is: **Project Participants:** Value Network Ventures Advisory Services Pte Ltd. Limited (VNV)

	and Bangladesh Bondhu Foundation (BBF)
Title of PA:	Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh
GS Reference No:	GS 12114
Applied Baseline and monitoring methodology:	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 04.0
Project Scale:	Large scale
Location of the project activity:	Republic of Bangladesh
Reported monitoring Period verified in this verification:	14/09/2022 – 13/09/2023 (both days inclusive)

As a part of on-site interviews, the verification team was able to confirm that the project implementation is in accordance with the project description contained in the PDD /B03/.

The project include distribution of energy efficient improved cooking stoves. The number of stoves deployed under the VPA have been confirmed by the monitoring database and as stated below.

Sl. No.	GS Reference No.	Number of ICS Distributed
1.	GS 12114	125,003

The purpose of the project is to provide end users with energy-efficient cookstoves (ICS) that moves end-users up the energy ladder and reduce greenhouse gas (GHG) emissions from the burning of non-renewable woody biomass for cooking in Bangladesh.

It was confirmed that Value Network Ventures Advisory Services Pte. Ltd. is the Project Developer for the PA. The actual project activity is in line with the PDD /B03/. Bangladesh Bondhu Foundation is the project implementer for the project activity.

The information (including data and variables) provided in the MR /01/ is in line with the details provided in the PDD /B03/.

In accordance with GS VVS version 01 /B01/, the verification team confirms that there is no information (data and variables) in the current monitoring period that are different from that stated in the PDD/B03/ which has caused an increase in the estimates of GHG emission reductions.

Verification team has assessed the project in order to check any proposed or actual changes to the project design in accordance with GS VVS version 01/B01/. In the opinion of CCIPL, there is no change to the project design. CCIPL's verification team confirms that the project is implemented within the boundary of the project activity as described in the PDD/B01/.

This is in compliance with § 9.4.7 GS VVS version 1.0 requirements /B01/.

E.4.2. Compliance of monitoring activities with the registered monitoring plan

The monitoring has been carried out in accordance with the monitoring plan contained in the PDD /B03/. This conclusion has been made based on assessment below.

E.4.2.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	Document Review, Interview
Findings	CL03 has been raised and successfully resolved. Please refer appendix 4 below.
Conclusion	Verification team confirms that the Data and parameters fixed ex ante are in compliance with the PDD /B03/ and the monitoring plan. Please refer Appendix 5 for detailed analysis of the ex-ante parameters. The verification took cognizance of §9.4.13 GS VVS version 01 /B01/ and other GS4GG requirements /B01/.

E.4.2.2. Data and parameters monitored

Means of verification	Document Review, Interview
Findings	CL01 has been raised and successfully resolved. Please refer appendix 4 below.
Conclusion	The Verification team confirms that the Data and parameters monitored are in compliance with the PDD/B03/ and the monitoring plan /B03/. A complete assessment of each of the monitored parameters has been provided in Appendix 6 of the verification report. The verification took cognizance of § 9.4.14 GS VVS version 01 /B01/ GS4GG Requirements/B01/.

E.4.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Findings	--
Conclusion	Monitoring surveys / KPTs were conducted during the current monitoring period. The total population of the stoves under the PA considered for the monitoring period is 125,003 number. The monitoring parameters required to be monitored through the sampling plan are: 1. Weighted average usage rate in project scenario p during year y (Up,y) 2. Quantity of fuel that is consumed in project scenario p during year y ($P_{p,y}$) As the target population is homogeneous, PP has employed representative sampling approach using 90/10 as confidence/precision. This is in line with the applied methodology /B02/. The sample size for monitoring/usage survey is determined using random sampling which is in line with the PDD. Based on the requirement stated in the GS methodology TPDDTEC v4, any sampling methods can be used, provided that the sample is selected randomly. The minimum sample size for the Project Usage Surveys was determined in line with para 4.3.3, page 43 of the applied methodology as >100 for sampling population >1000. Thus, a sample size of 125 was considered

	by PP, the project ICS population being >1000 units. As per the monitoring plan in the PDD, the usage survey sample end users were selected via running a random sampling generator across the ICS distribution database of the project. A total of 111 usage surveys were completed by the PP. This random number generator results /25/ and project ICS database /07/ were verified by the verification team to confirm that the sample selection for the project usage surveys has been carried out appropriately as per random numbers generated. Further, for PFTs, the sample size was determined as per the Kitchen Performance Test Protocol v3.0 – Appendix 3 and applied Methodology - ANNEX 2 (Complementary Guidelines) and c) para 4.4.6 of the methodology. PP applied independent (cross-sectional) sampling i.e. PFT sample households were different from BFT sample households. PP, based on its knowledge, experience and professional judgement, considered the expected detectable difference in mean as 50% and pooled CV of measurement as 0.4, yielding a sample size of 10 as per CCA KPT protocol v3.0. Appendix 3. As per para 4.4.6 of the applied methodology minimum PFT sample size must be 30. Therefore, a sample size of 35, for PFT, was determined (including buffer to accommodate any non-responses) and the PFT samples were selected from the already randomly selected project survey samples. The PFT samples were selected from the already randomly selected project survey samples. A total of 33 PFTs were completed. As per paragraph 25 of the CDM Sampling Standard, version 09 /B04/, the verification team has to verify whether the project participants or the coordinating/managing entity have implemented the sampling and surveys according to the sampling plan in the 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. The verification team of the VVB has applied a sampling approach for on-site visits as part of verification in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0/B04/. In accordance with the paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team and accordingly steps listed in paragraph 29 of the sampling standard shall be followed. Verification team has opted AQL of 0.5 % and UQL of 20 %, the producer risk used is 10 % and consumer risk used was 20 %. Acceptance number (c) thus determined for the sample is 0 in determining the VVB's sample size. Accordingly, site visits for 08 households / samples from the PP's sample size for the monitoring survey and project KPT for the monitoring period with acceptance number (c) as 0 was conducted. As a result, a total of 08 households (08 for project survey and KPTs) were interviewed. The Project usage survey and KPTs were carried out by PP during the 29/07/2023 to 16/08/2023. The survey/KPT participants were interviewed by the verification team.

The Information provided in the monitoring survey/KPT records /10//20/, have been cross checked during the Onsite visit. As a part of random sampling, the Verification team could confirm the monitoring survey/KPT data /10//20/ 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
Monitoring Usage surveys and project KPT /10//20/	Acceptance Sampling based on-site physical visits to sample households	111 monitoring/usage survey (including 33 KPTs)	08

The details of the samples interviewed are listed in section D.3 (under the list of interviewed persons). No discrepancy was found between PP records and on-site observations or interview responses for any of the 08 sample household visits made by VVB team 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 assessment of other SDG impact parameters, questionnaire form/10/ was prepared and used by the PP during the monitoring surveys.

During the on-site interviews, the verification team cross-checked these documents, and no discrepancies were found between the values reported in the emission reduction calculator and the monitoring survey records for the impact parameters either. Furthermore, the training & competency of the personnel/16/, who conducted such surveys/test were checked and found to be appropriate. The enumerators were also interviewed for the process, method used, and their competency to confirm that survey and KPTs were standardised and appropriately applied. The enumerators were found competent to perform assigned tasks.

The Usage Rate used by the PP for the PA is 90% based on the Good Practice.
The Verification team verified that the monitored usage rate for the current monitoring period of the project technology was higher than 90%. However, the PP has claimed only 90% based on "Requirements and Guidelines: Usage Rate Monitoring" v.2 para 2.1.1 table 1 /B01/ which states that as a level of 'good practice', under 'optional' applicability "maximum 90% can be the claimable usage rate". Good practice monitoring requirements were verified by verification team through checking the documents such as field team training and supervision records /16/ and end-user training and follow ups with awareness campaign. Hence it is in compliance with para 2.3 of "Requirements and Guidelines: Usage Rate Monitoring" v.2 /B01/. The verification team has also verified the documents related to the mandatory monitoring requirements such as usage / monitoring survey /10//20/ depicting details on stove use & non-use, kitchen observation, interview with the primary

	cook, GPS co-ordinates, along with pictures of the cooking area and telephonic survey details of the randomly selected 08 end users.

E.4.4. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document Review, Interview
Findings	-
Conclusion	The monitoring equipment used for conducting the KPT are weighing scale, and moisture meter. All the monitoring equipment were newly purchased at the time of use, so measurements were done with the necessary guarantees and hence deemed acceptable /08/. The factory calibration is found to be valid covering current monitoring period. QA/QC procedures stated in MR comply with PDD/B03/ and the details of equipment used for conducting KPT is as follows:

Specifications	Digital Weighing Scale	Digital Moisture Meter
Manufacturer	AND	Octopass
Model/Serial No.	FKS series	MD 814
No. of units	4	4
Accuracy	1g	1%

The verification took cognizance of §9.4.18 GS VVS version 01.0 /B01/ and other GS4GG Requirements /B01/.

E.4.5. Assessment of data and calculation of SDG impacts

In line with the requirement of GS VVS version 01.0/B01/, the verification team has reviewed the Monitoring report /01/ and ER spread sheets /02/ to check the arithmetic calculation of the emission reductions. The equation used for the calculation is compared with those provided in the PDD /B03/ and the methodology TPDDTEC version 04.0/B02/.

E.4.5.1. Calculation of baseline estimate GHG emissions or baseline estimate net GHG removals by sinks

Means of verification	Document Review, Interview
Findings	-
Conclusion	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 207,453 tCO_2e. The details of the summary of the emission reductions achieved during the monitoring period, has been provided in the table below. $$ER_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,wood} \times (f_{NRB,b,y} \times EF_{b,wood,co2} + EF_{b,wood,nonco2})) \times 95\%$$

Where,

ERy	**Emission reduction for total project activity in year y (tCO2e/Year)**
$N_{b,p,y}$	Number of project technology-days included in the project database for baseline b/project p pair in year y (Days)
$U_{p,y}$	Cumulative usage rate for the technologies in the project scenario p in year y (fraction)
$SFS_{p,b,y}$	Specific fuel savings for an individual project technology of baseline b/project p pair in year y (tonnes/technology*days)
$NCV_{b,wood}$	Net calorific value of the wood fuel that is substituted or reduced in baseline b (TJ/tonnes)
$f_{NRB,b,y}$	Fractional non-renewability status of woody biomass fuel during year y (fraction)
$EF_{b,wood,CO2}$	CO_2 emission factor from use of wood fuel (tCO_2/TJ)
$EF_{b,wood,nonCO2}$	Non-CO_2 emission factor arising from use of wood fuel, when baseline fuel is woody biomass (tCO_2/TJ)

For this Monitoring period (14/09/2022 to 13/09/2023)

Vintage	**ER (tCO_2e)**
14/09/2022– 31/12/2022	12,411
01/01/2023– 13/09/2023	195,042
Total for the monitoring period	**207,453**

E.4.5.2. Calculation of project estimate GHG emissions or actual net GHG removals by sinks

Means of verification	Document Review, Interview
Findings	--
Conclusion	The primary baseline / project scenario fuel is woody biomass. The project boundary is comprised of the households where the project technologies (ICS) is physically located, and the fuel is collected/purchased in the areas surrounding the households (local market/local forest area). The same is confirmed by verification team during onsite visit interview with end users. Hence the transportation distance for fuel (including both long-distance and home delivery transport) is less than 200 km. Thus, as per applied methodology baseline/Project emissions/from transportation of fuel has been neglected.

E.4.5.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Findings	CL 03 has been raised and successfully resolved. Please refer appendix 4 below

Conclusion	PP has opted default option, adjustment factor of 0.95 to account leakage in line with per section 3.11 £3.11.2 (option 1) of the applied methodology/B02/ As per the demonstration in the PDD /B03/ and MR /01/, the adjustment factor of 0.95 has been accounted for leakage for the monitoring period. Verification team confirms that leakage factor is used correctly in the calculations, 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/. This is in line with the §9.4.14 of the GS VVS version 1.0 /B01/.

E.4.5.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	Document Review, Interview
Findings	-
Conclusion	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 207,453 tCO_2e. The details of the summary of the emission reductions achieved during the monitoring period, has been provided in the table below.

$$ER_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,wood} \times (f_{NRB,b,y} \times EF_{b,wood,co2} + EF_{b,wood,nonco2})) \times 95\%$$

Where,

ERy	**Emission reduction for total project activity in year y (tCO2e/Year)**
$N_{b,p,y}$	Number of project technology-days included in the project database for baseline b/project p pair in year y (Days)
$U_{p,y}$	Cumulative usage rate for the technologies in the project scenario p in year y (fraction)
$SFS_{p,b,y}$	Specific fuel savings for an individual project technology of baseline b/project p pair in year y (tonnes/technology*days)
$NCV_{b,wood}$	Net calorific value of the wood fuel that is substituted or reduced in baseline b (TJ/tonnes)
$f_{NRB,b,y}$	Fractional non-renewability status of woody biomass fuel during year y (fraction)
$EF_{b,wood,CO2}$	CO_2 emission factor from use of wood fuel (tCO_2/TJ)
$EF_{b,wood,nonCO2}$	Non-CO_2 emission factor arising from use of wood fuel, when baseline fuel is woody biomass (tCO_2/TJ)

For this Monitoring period (14/09/2022 to 13/09/2023)

Vintage	ER (tCO_2e)
14/09/2022– 31/12/2022	12,411
01/01/2023– 13/09/2023	195,042
Total for the monitoring period	**207,453**

E.4.5.5. Comparison of actual SDG Impacts in MR with estimated SDG Impacts in PDD

Means of verification	Document Review
Findings	CL02 has been raised and successfully resolved. Please refer appendix 4 below
Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the PDD /B03/ is 239,288 tCO_2e and the actual emission reductions achieved for the monitoring period is 207,453 tCO_2e. Comparison of the actual GHG emission reductions with the estimates in the included specific PDD/B03/ is given in the below table.

Parameters	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values achieved during this monitoring period
HHS	10,000 Taka/year	7,071 Taka/year
ET	300	240
ATS	3-4 Hrs/HH/day	1.67 Hrs/HH/day
HHB	100 %	90 %
ACS	Annual average –180,000 Total -900,000	125,003
EECT	300	240 Male – 172 Female - 68
FC	0.14 TonnesNRB/person-meal/day	0.07 TonnesNRB/person-meal/day
Emission Reduction	239,288 tCO_2	207,453 tCO_2

In summary, verification team confirms that actual emission reduction is lower than the estimate of the PDD /B03/ for the current monitoring period. The emission reduction calculations provided in the spreadsheet /02/ have been verified to be correct and in line with the PDD /B03/.

The verification took cognizance of §9.4.25 GS VVS version 01.0/B01/and GS4GG Requirements /B01/.

E.4.5.6. Remarks on difference from estimated value in included PDD

Means of verification	Document review
Findings	-
Conclusion	The ex-ante estimated value of the emission reductions for the monitoring period as per the PDD /B03/ is 239,288 tCO_2e and the actual emission reductions achieved for the monitoring period is 207,453 tCO_2e. For SDG 13, since actual emission reduction is lower than the estimated value and hence it is acceptable to the verification team. For SDG 1, 4, 5, 7, 8 and 15 parameters, the actual values are equal and/or lower than the estimated value, which is deemed appropriate and thus acceptable to the VVB.

E.4.6. Assessment of reported sustainable development co-benefits

Means of verification	Document Review, Interview
Findings	--
Conclusion	**SDG 1: No Poverty** Ex-post Monitoring Survey Records Net Benefit (SDG 1) = $HHS_{Project} – HHS_{Baseline}$ Where, $HHS_{Project}$ = Average household savings due to decrease in expenditure on basic service due to adaptation of project technology in project i.e., reduction in expenditure on purchased fuel for cooking in project $HHS_{Baseline}$ = Average household savings Due to decrease in expenditure on basic service due to adaptation of project technology in baseline i.e., reduction in expenditure on purchased fuel for cooking in baseline. For this monitoring period (14/09/2022 to 13/09/2023) Project estimate: 7,071 Taka/year Baseline estimate: 0 Taka/year Net benefit: 7,071 Taka/year **SDG 4: Quality education** Ex-post Monitoring Survey Records Net Benefit (SDG 4) = $ET_{Project} – ET_{Baseline}$ Where: $ET_{Project}$ = Number of employees (full-time, part-time, or temporary), by gender who received training services of any type via project during the concerned monitoring period in Project. $ET_{Baseline}$ = Number of employees (full-time, part-time, or temporary), by gender who received training services of any type via project during the concerned monitoring period in baseline For this monitoring period (14/09/2022 to 13/09/2023)

Project estimate	240
Baseline estimate	0
Net benefit	240

SDG 5: Gender Equality

Ex-post Monitoring Surveys Records

Net Benefit (SDG 5) = $ATS_{project}$ - $ATS_{Baseline}$

Where:

$ATS_{project}$ = Average time saving, associated with cooking and/or fuel collection time, due to adoption of project technology in project.

$ATS_{Baseline}$ = Average time saving, associated with cooking and/or fuel collection time, due to adoption of project technology in baseline

For this monitoring period (14/09/2022 to 13/09/2023)

Project estimate	1.67Hrs/HH/day
Baseline estimate	0 Taka/year
Net benefit	1.67Hrs/HH/day

SDG 7: Affordable and Clean Energy

Proportion of population with primary reliance on clean fuels and technology.

Net Benefit (SDG 7) = $HHB_{Project}$ - $HHB_{Baseline}$

Where:

$HHB_{Project}$ = Number of beneficiaries household provided access to Improved cook stoves in Project

$HHB_{Baseline}$ = Number of beneficiaries household provided access to Improved cook stoves in Baseline

For this monitoring period (14/09/2022 to 13/09/2023)

Project estimate	90 %
Baseline estimate	0
Net benefit	90%

Number of beneficiaries household provided access to Improved cook stoves.

Net Benefit (SDG 7) = $ACS_{Project}$ - $ACS_{Baseline}$

Where,

$ACS_{Project}$ = % of households having access to clean fuels and/or technologies for domestic cooking in project (% of operating ICS units in Project)

$ACS_{Baseline}$ = % of households having access to clean fuels and/or technologies for domestic cooking in baseline (% of operating ICS units in Baseline)

For this monitoring period (14/09/2022 to 13/09/2023)

Project estimate	125,003
Baseline estimate	0
Net benefit	125,003

SDG 8: Decent Work and Economic Growth

Net Benefit(SDG 8) = $EECT_{Project}$ - $EECT_{Baseline}$

Where,

$EECT_{Project}$ = Total number of employees by employment contract and employment type as a result of project activity in Project, by gender

$EECT_{Baseline}$ = Total number of employees by employment contract and employment type as a result of project activity in baseline, by gender

For this monitoring period (14/09/2022 to 13/09/2023)

Project estimate	240 (Male-172, Female-68)
Baseline estimate	0
Net benefit	240 (Male-172, Female68)

SDG 15: Life on Land

Net Benefit (SDG 15) = $FC_{Baseline}$ - $FC_{Project}$

$FC_{Baseline} = P_{b,y} * f_{NRB,i,y}$

$FC_{Project} = P_{p,y} * f_{NRB,i,y}$

Where:

$FC_{Project}$ = Total amount of non-renewable wood fuel consumed in Project

$FC_{Baseline}$ = Total amount of non-renewable wood fuel consumed in baseline

For this monitoring period (14/09/2022 to 13/09/2023)

Baseline estimate	0.20
Project estimate	0.07
Net benefit	0.13

The verification took cognizance of §9.4.25 GS VVS version 01.0/B01/and GS4GG Requirements /B01/. The Verification team confirms that the data and parameters monitored related to sustainable development co-benefits are in compliance with the PDD and the monitoring plan /B04/.

SECTION F. Internal quality control

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The final verification report passed a technical review. A technical reviewer qualified in accordance with the CCIPL's qualification scheme for CDM/GS4GG validation and verification has performed the technical review.

SECTION G. Verification opinion

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Carbon Check (India) Private Ltd. has performed the 1st periodic verification of the large-scale GS Project, GS 12114 : "Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh" for the period 14/09/2022 – 13/09/2023 (both the days included).

The verification team assigned by the VVB concludes that the PDD (Version 4.1, dated 14/03/2024),/B03/ and the Monitoring report (Version 3.0, dated 02/03/2024) /01/, meet all relevant GS4GG requirements /B01/. The verification has been conducted in-line with the §9.7.1 GS VVS version 01 /B01/.

Verification methodology and process:

The Verification team confirms the contractual relationship was signed on 27/10/2023 between the VVB, Carbon Check (India) Private Ltd. and the Project Participant, (Value Network Ventures Advisory Services Pte Ltd. Limited) /24/. The team assigned to the verification meets the Carbon Check (India) Private Ltd.'s internal procedures including the UNFCCC and GS requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and Carbon Check's procedures and requirements.

The verification is being performed as per the requirements described in the GS VVS, version 01.0 /B01/ and GS4GG requirements and constitutes the review and completion of the following steps:

- Reviewing the MR (Version 3.1 dated 14/03/2024)/ 01/,
- Reviewing the PDD (Version 4.1 dated 14/03/2023)/ B03/, including the monitoring plan and the corresponding validation report/s /B03/;
- Desk review of the MR, PDD and other relevant documents including documents related to the project's contribution in achieving emission reductions as well as various SDGs.
- Review of the applied monitoring methodology (TPDDTEC version 04).
- Review of any CMP and EB decisions, clarifications, and guidance.
- On-site assessment interviews (09/12/2023 to 11/12/2023)
- Resolution of CARs and CLs raised during verification.
- Issuance of Verification Report.

The project activity correctly implemented according to the selected monitoring methodology/B02/, and monitoring plan and the PDD/B03/. The monitoring system was implemented, maintained in a proper manner, while collected monitoring data allowed for the objective verification of the amount of achieved GHG emission reductions. Through the review and onsite interviews, the verification team confirms that the project has resulted in the 207,453 CO_2e emission reductions for the period 14/09/2022 – 13/09/2023 (inclusive of both the dates) during the first monitoring period for GS 12114

Verified emission reductions:

Vintage	ER (tCO_2e)
14/09/2022– 31/12/2022	12,411
01/01/2023– 13/09/2023	195,042
Total for the monitoring period	**207,453**

CCIPL as a VVB is therefore pleased to issue a positive verification opinion in the Certification statement given below.

SECTION H. Certification statement

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Carbon Check (India) Private Ltd., the VVB, has performed the 1st period verification of the GS project, GS 12114, “Clean Cooking Project for Refugees, Host Communities and Other Marginalised Communities in Bangladesh”. The purpose of the project is to provide end users with clean cooking technologies such as energy-efficient cookstoves (ICS) that moves end-users up the energy ladder and reduce greenhouse gas (GHG) emissions from the burning of non-renewable woody biomass for cooking in Bangladesh.

The project is designed to generate emission reductions by distribution of the ICS cook stoves in Bangladesh. The PPs are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project. It is VVB’s responsibility to express an independent verification statement on the reported GHG emission reductions from the project. The verification is carried out in-line with the GS VVS and GS4GG requirements.

The verification was performed to identify the compliance of the project with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and on-site interviews that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

The verification is based on:

- Project and its monitoring plan for the monitoring period 14/09/2022 – 13/09/2023
- Approved GS monitoring methodology TPDDTEC, version 4.0;/B02/
- Validation report and the PDD /B03/ ;
- Monitoring report Version 4.1 dated: 14/03/2024.

This statement covers verification period from 14/09/2022 – 13/09/2023 (both dates included).

The VVB had raised 6 clarification requests and no corrective action. No FAR was raised this has been successfully resolved. The VVB considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the monitoring methodology and the monitoring plan contained in the PDD are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 207,453 tCO2e for the period 14/09/2022 – 13/09/2023 (inclusive of both the dates) and achieved SDG benefits as detailed in Appendix 6 for the period 14/09/2022-13/09/2023 (inclusive of both the dates) and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Limit
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CER	Certified Emission Reduction
CL	Clarification Request
PP	Co-ordinating and Managing entity
PDD	Project Design Document
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DR	Document review
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
EI	External individual
ER	Emission Reduction
FA	Final Approval
FAR	Forward Action Request
FVR	Final verification Report
GACC	Global Alliance for Clean Cookstoves
GHG	Greenhouse gas(es)
GS4GG	Gold Standard for the Global Goals
GWh	Giga Watt Hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
IR	Internal resource
KPT	Kitchen Perfomance Test
MP	Monitoring Period
MWh	Mega Watt Hour
MR	Monitoring Report
PP	Project Participant
QC/QA	Quality control /Quality assurance
SDG	Sustainable Development Goal
TA	Technical Area
TR	Technical Review
TRF	Transition Request Form
UQL	Unacceptable Quality Limit
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/IEC14065:2020, 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			

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	Expiry Date
5th December 2023	31st December 2024

Ms. Priya Suman
Compliance Officer

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

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Manas Halder

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:

☒ 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 Bangladesh			

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
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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:

☒ 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 Sri Lanka			

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1	☐ 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
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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.	Documents
/01/	1. Initial Monitoring report for the monitoring period, Version 1 dated 10/11/2023. 2. Monitoring report for the monitoring period, Version 2 dated 02/01/2024 3. Monitoring report for monitoring period, Version 3 dated 02/03/2024 4. Monitoring report for monitoring period, Version 3.1 dated 14/03/2024
/02/	• Initial Emission reduction calculation sheet corresponding to #1 • Emission reduction calculation sheet corresponding to #2 • Final Emission reduction calculation sheet corresponding to #3
/03/	Technical specifications of the Sashroyi Chulha stove.
/04/	Beneficiary agreement as proof for start date of the project activity
/05/	fNRB report and calculation sheet records
/06/	Company registration certificate
/07/	Project activity database -Stove serial number (unique ID) ; Date of installation/distribution
/08/	Legal ownership certificate of Bangladesh Bondhu Foundation (BBF)
/09/	HR employment records Employment declaration
/10/	• Project Survey Records • Baseline Survey Records
/11/	Thermal Efficiency Certificate of ICS by Bangladesh Council of Scientific and Industrial Research (BCSIR)
/12/	Calculation of SDG impacts
/13/	Agreement between Value Network Venture Advisory Service Pte Ltd and Bangladesh Bondhu Foundation
/14/	Operating lifetime and life span certificate of Sashroyi Chula
/15/	Beneficiary agreement as proof of Carbon Credits waiver by end user
/16/	Training Records of project staff at site
/17/	Stakeholder Consultation Report
/18/	Declaration for non-receiving of ODA for project
/19/	Grievance logbook
/20/	Project KPT data and Results
/21/	Comparative Analysis - Baseline and Project KPT results
/22/	Baseline stove WBT test results
/23/	Declaration of double counting
/24/	Unique identification of the project ICS.
/25/	Screen shot of Stat trek online random number generator used for sampling
/26/	Contractual relationship between the VVB, Carbon Check (India) Private Ltd. and the Project Participant, (Value Network Venture Advisory Service Pte Ltd) signed on 27/10/2023

Ref no.	Reference Document
/B01/	1. Gold Standard Principles and Requirements version 1.2, dated 24/10/2019 2. GS Validation & Verification Body Requirements version 2.0, dated 14/01/2021 3. Community Services Activity Requirements (version 1.1) under GS4GG https://globalgoals.goldstandard.org/200-gs4gg-community-services-activity-requirements/ 4. GS Validation-and-Verification-Standard version 1.0

	5. GS Requirements and Guidelines: Usage Rate Monitoring Version 2
/B02/	Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) version 04.0
/B03/	PDD Version 4.1 dated 14/03/2024 and corresponding validation report
/B04/	Sampling and Survey a) CDM Sampling Standard, version 09.0 b) Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0.
/B05/	Site Visit And Remote Audit Requirements And Procedures Version 2.0

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

Table 1: CARs from this verification:
Nil

Table 2. CLs from this verification:

CL ID	CL 01	**Section no.**	Emission reduction sheet	**Date:** 11/12/2023
Description of CL				
PP is requested not hard code the emission reduction sheet, also the source of parameter for the values should be clear.				
Project participant response				**Date:** 02/01/2024
The parameters listed in tab "Emission reduction Calculation" of the ER sheet are of following three categories, a) Default values sourced directly from applied methodology/published literature hence are hard-coded. b) valued dependent on the default values, and c) values (P_{by} and P_{py}) obtained from project surveys and field tests. Values for (c) are hard-coded due to having proprietary concerns and confidentiality considerations. The same have been/shall be shared VVB and SC for their perusal as separate files. The sources of the parameters are now updated wherever applicable in the revised ER sheet being submitted.				
Documentation provided by project participant				
GS 12114 MP1 Monitoring Report v2.0 02012024				
VVB assessment				**Date:** 25/01/2024
PP has submitted the revised emission reduction sheet ,some of values of the ER sheet are hardcoded due to confidentiality of the data, and they are shared separately in different spread sheet to the VVB, this has been checked by the verification team and deemed acceptable.. Hence CL 01 is closed.				

CL ID	CL 02	**Section no.**	E.5	**Date:** 11/12/2023
Description of CL				
In section E.5 of the MR PP needs to add the units for all the values, PP needs to check and update the same.				
Project participant response				**Date:** 02/01/2024
The "*Value(s) applied" has been provided in* section D.1 of the MR wherever applicable. The units for all the parameters have now been provided in various section of the revised MR.				
Documentation provided by project participant				
GS 12114 MP1 Monitoring Report v2.0 02012024				
VVB assessment				**Date:** 15/01/2024
PP has submitted revised MR. The missing values of "value(s) applied" in MR has been added, this has been checked and deemed appropriate. Hence CL 02 is closed.				

CL ID	CL 03	**Section no.**	E.3	**Date:** 11/12/2023
Description of CL				

In section E.3 of the MR, PP has mentioned Not applicable, however the calculation applies methodology default value. PP to check and confirm the same.	
Project participant response	**Date:** 02/01/2024
Section E.3 of the MR has now been updated in the revised MR and the same is being submitted.	
Documentation provided by project participant	
GS 12114 MP1 Monitoring Report v2.0 02012024	
VVB assessment	**Date:** 15/01/2024
PP has submitted the revised MR, and has updated the section E.3 in the MR this has been checked by the verification team deemed appropriate. Hence CL 03 is closed.	

CL ID	CL 04	**Section no.**	E.6	**Date:** 11/12/2023
Description of CL				
In section E.6 of the MR, PP has mentioned Not applicable. PP to provide a clear justification on the same.				
Project participant response				**Date:** 02/01/2024
Section E.6 of the MR has now been updated in the revised MR and the same is being submitted.				
Documentation provided by project participant				
GS 12114 MP1 Monitoring Report v2.0 02012024				
VVB assessment				**Date:** 15/01/2024
PP has submitted the revised MR, updated the section E.6 in the revised MR, this has been checked by the verification team and deemed appropriate. Hence CL 04 is closed.				

CL ID	CL 05	**Section no.**	E.4	**Date:** 11/12/2023
Description of CL				

- PP to confirm on the disposal/discontinuation of traditional cookstove.
- PP shall provide the list of the people employed, and their respective roles in ER sheet.
- SDG8.5: PP shall confirm if any female employees are appointed in the project activity. If not the then PP shall explain

PP shall provide supporting documents/evidence for the following:

- Random Sample selection
- Salary slips/employment records
- Pictures from ex-post monitoring survey

Project participant response	**Date:** 02/01/2024

- At the time of project ICS distribution end users agrees for replacement of baseline stove with the project ICS. Refer clause 6 of the beneficiary agreement.

  Further, in case existing baseline technology is found in use in parallel with project ICS, the baseline consumption shall be adjusted accordingly:

  - if the baseline fuel consumption was defined based on the total fuel used for cooking by the user, determine the percentage of meals or cooking performed on the project technology and multiply the baseline fuel usage by this percentage.
  - adjust the baseline fuel consumption to be defined based only on the use of the cooking technology that is directly replaced by the project technology.

  Also, during the monitoring period, all the sampled households were found to be exclusively using the project ICS indicating a discontinuation of traditional.

- A sample screenshots of the HR register containing a list of employed staffs with their respective roles is being submitted.
- The PP had submitted a declaration outlining the total employee count prior to the site visit, according to out of a total of 240 employees, 68 are female. The declaration is being resubmitted.
- Evidence of random sampling is being submitted.
- A sample employment contract specifying the corresponding salary is being submitted.Sample

pictures from ex-post monitoring survey are being submitted.
Documentation provided by project participant
– *Sample screenshots of the HR register with employee roles.* – *Declaration of total employee count with gender breakdown.* – *Evidence of random sampling.* – *Sample employment contract detailing corresponding salaries.* – *Sample pictures from the ex-post monitoring survey*
VVB assessment **Date:** 15/01/2024
• PP submitted the beneficiary agreement, in which end users agreed to replace the baseline stove with project stove. During the on-site visit VVB also observed that there is no baseline stove in use. Justification provided by PP is deemed acceptable. • PP has provided the Employee records with their designation, this has been checked by verification team.. • PP has submitted the declaration of employment by Bangladesh Bondhu Foundation (BBF) where mentioned that there 68 employees are female among 240 employees. VVB crosschecked the information with the submitted records and deemed acceptable. • PP has provided the random sample selection generator and deemed acceptable. • PP has provided the contract details employment corresponding salary. • PP has provided the sample pictures of ex-post monitoring survey. Hence CL 05 is closed.

CL ID	CL 06	**Section no.**	G.1	**Date:** 11/12/2023
Description of CL				
PP to confirm on the grievance received during this monitoring period.				
Project participant response				**Date:** 02/01/2024
No negative comments/grievance that would require adjustments to the project were identified during the monitoring period. The same was verified by the VVB during their audit site visit.				
Documentation provided by project participant				
VVB assessment				**Date:** 15/01/2024
VVB during the onsite visit has check the grievance book, and also confirmed with the interview with the end user on the grievances in regard to project ICS, however there were no grievances. The justification provided by PP is deemed acceptable. Hence CL 06 is closed.				

Table 3: FARs from this verification:

Nil

Appendix 5. Data and parameters fixed ex ante.

Relevant SDG Indicator	SDG 13
Parameter	Baseline scenario survey + KPT results
Data unit	NA
Default values used	The baseline surveys and KPTs were conducted to substantiate the baseline scenario establishing the prevalence use of wood fuel on inefficient open fire/traditional wood stove
Purpose of data	Establishing the baseline scenario of the host country's demographic regarding dependence on cooking appliances, fuel type and average specific fuel consumption in baseline.
Source of verification	Baseline Scenario Survey + KPT performed by PP
VVB Assessment	VVB has reviewed baseline survey and KPT sheet provided by PP and crosschecked during the onsite visit also. Baseline scenario survey result is deemed acceptable.

Relevant SDG Indicator	SDG 13
Parameter	Project technology description
Data unit	NA
Default values used	Manufacturer: Bangladesh Bondhu Foundation (BBF) Product Name: Sashroyi Chulha Capacity/Service Level: Domestic Technology Type: Improved Cook Stove Type of stove: Portable Rated Thermal Efficiency: 40%
Purpose of data	-
Source of verification	Certifications by national standards body or an appropriate certification party recognised by national standards body.
VVB Assessment	VVB reviewed the Thermal Efficiency Certificate of ICS by Bangladesh Council of Scientific and Industrial Research (BSSIR)provided by PP and deemed acceptable.

Relevant SDG Indicator	SDG 13
Parameter	Expected technical life of project stove
Data unit	Years
Default values used	Up to 8 Years
Purpose of data	-
Source of verification	Manufacturer specifications/Declaration
VVB Assessment	The expected technical life of project stove is 8 years. VVB has reviewed the manufacturer specification and Declaration by manufacturer on operating lifetime and life span of Sashroyi Chula and deemed acceptable.

Relevant SDG Indicator	SDG 13
Parameter	Indoor air pollution (IAP) levels of the project technology

Data unit	NA
Default values used	-
Purpose of data	Demonstration that indoor air pollution levels has not worsen than the baseline scenario.
Source of verification	For IAP level of Project Technology: report of lab testing of the technology. For IAP level in Baseline scenario: published literature/report by independent agencies
VVB Assessment	The Project ICS is portable stove, and the end users can cook indoor as well as outdoor. VVB during the on-site interview with the end users could confirm that the air quality has improved than in baseline scenario.

Relevant SDG Indicator	SDG 13
Parameter	Avoidance of double counting or double claiming among project participants
Data unit	NA
Default values used	-
Purpose of data	Avoidance of double counting or claiming with other parties directly involved with the project
Source of verification	Written assertions with the project developer of the ownership rights and intention of selling the emission reductions resulting from the project activity directed at all the applicable parties. 1. Contract with other PPs 2. Customer agreement with project beneficiary.
VVB assessment	VVB has reviewed the contracts with PPs and customer agreement with project beneficiary during desk review and on-site visit deemed acceptable.

Relevant SDG Indicator	SDG 13
Parameter	Avoidance of double counting or double claiming with other mitigation actions
Data unit	NA
Default values used	-
Purpose of data	Review and analysis of mitigation actions in other voluntary markets and UNFCCC/compliance mechanisms to avoid double counting or claiming.
Source of verification	Registry of CDM/GS and other voluntary standards Declaration by PP
VVB assessment	The project uniquely identified that each ICS distributed with unique identification serial number. The project also does not utilize any assets of a former project and there is no other carbon registered project in Bangladesh of same kind. VVB has confirmed during the desk review and onsite visit and deemed acceptable.

Relevant SDG Indicator	SDG 13

Parameter	Regulatory framework for provision of thermal energy services
Data unit	NA
Default values used	-
Purpose of data	Confirmation of the project does not undermine or conflict with any national, sub-national or local regulations or guidance for thermal energy supply/devices or fuel supply or use
Source of verification	The National Renewable Energy Policy, 2008 The National Sustainable Renewable Energy Development Authority (SREDA) Act, 2012 The Country Action Plan for Clean Cookstoves (November 2013) The Energy Efficiency and Conservation Master Plan (EECMP) of Bangladesh, launched in 2016
VVB assessment	VVB has reviewed the policy mentioned in the PDD, the project complies with all the national polices and regulations and deemed acceptable.

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$EF_{b,CO2}$
Data unit	tCO_2/TJ
Default values used	Fuelwood (Residential): 112
Purpose of data	Calculation of baseline scenario
Source of verification	IPCC default value as per 2006 IPCC Guidelines for National Greenhouse Gas Inventories, volume 2, chapter 2 (Table2.5)
VVB assessment	IPCC default value for fuel wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	$EF_{b,nonCO2}$
Data unit	tCO_2/TJ
Default values used	Fuelwood (Residential): 9.46
Purpose of data	Calculation of baseline scenario
Source of verification	IPCC default value considering AR5 GWP.
VVB assessment	IPCC default value

Relevant SDG Indicator	SDG 13, Climate Action
Parameter	$NCV_{b,wood}$
Data unit	TJ/ton
Default values used	Fuelwood: 0.0156 TJ/ ton
Purpose of data	Calculation of the baseline scenario
Source of verification	IPCC default 2006, volume 2, chapter 1 (Table 1.2)
VVB assessment	IPCC default value

Relevant SDG Indicator	SDG 13, Climate action

Parameter	$f_{NRB,i,y}$
Data unit	Percentage
Default values used	83.5
Purpose of data	CO_2 Emission calculation in project scenario
Source of verification	Assessment based on CDM Methodological tool 30: Calculation of the fraction of non-renewable biomass, Version 04.0. The $f_{NRB,i,y}$ value will remain fixed during the crediting period.
VVB assessment	Calculated according to CDM tool 30 , v4.0, fractional non-renewability status of woody biomass fuel during year y ($f_{NRB,i,y}$) is 83.5.

Relevant SDG Indicator	SDG 13
Parameter	$P_{b,y}$
Data unit	Kg/person-meal/day
Default values used	Wood: 0.6554
Purpose of data	For $SFS_{b,p,y}$ Calculation
Source of verification	Baseline Performance Field Tests Results (conducted by PP)
VVB assessment	The value is consistent with PDD /B04/

Relevant SDG Indicator	SDG 13, Climate action
Parameter	LEp,y
Data unit	tCO2e per year
Default values used	0.95 times total Ery
Purpose of data	Account for the leakage emissions
Source of verification	Assessment based on Default value as per section 3.11 para 3.11.2(option 1) of the applied methodology
VVB assessment	As per methodology the leakage in project scenario p during year y is 0.95 times of total ER.

Relevant SDG Indicator	SDG 1
Parameter	$HHS_{Baseline}$
Data unit	Taka/year
Default values used	0
Purpose of data	SDG 1 Impact calculation
Source of verification	--
VVB assessment	The average household savings due to reduction in expenditure on purchased fuel for cooking in baseline is 0 Taka/year

Relevant SDG Indicator	SDG 4
Parameter	$ET_{Baseline}$
Data unit	Number
Default values used	0

Purpose of data	SDG 4 Impact calculation
Source of verification	---
VVB assessment	In baseline there is no employee received training

Relevant SDG Indicator	SDG 5
Parameter	$ATS_{Baseline}$
Data unit	Hrs/HH/day
Default values used	0
Purpose of data	SDG 5 Impact calculation
Source of verification	--
VVB assessment	In baseline there is no average time saving, associated with cooking and/or fuel collection time in household.

Relevant SDG Indicator	SDG 7
Parameter	$HHB_{Baseline}$
Data unit	Number
Default values used	0
Purpose of data	SDG 7 Impact calculation
Source of verification	--
VVB assessment	There was no ICS has been distributed in baseline.

Relevant SDG Indicator	SDG 7
Parameter	$ACS_{Baseline}$
Data unit	%
Default values used	0
Purpose of data	SDG 7 Impact calculation
Source of verification	-
VVB assessment	In baseline there was no household having access to clean fuels and/or technologies for domestic cooking

Relevant SDG Indicator	SDG 8
Parameter	$EECT_{Baseline}$
Data unit	Number
Default values used	0
Purpose of data	SDG 8 Impact calculation
Source of verification	-
VVB assessment	There was no employment contract in baseline.

Relevant SDG Indicator	SDG 15
Parameter	$FC_{Baseline}$
Data unit	TonnesNRB/person-meal/year
Default values used	0.20
Purpose of data	SDG 15 Impact calculation
Source of verification	Calculated using value of $P_{b,y}$ and $f_{NRBi,y}$
VVB assessment	Calculated the total amount of non-renewable wood fuel consumed in baseline was 0.20 TonnesNRB/person-

	meal/year. VVB crosschecked the value and deemed acceptable

Appendix 6: Data and parameters monitored.

SDG 13

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Avoidance of double counting or double claiming among project technology end users.
Measuring frequency/Time Interval:	Captured at the time of distribution of project ICS dissemination
Reporting frequency:	Captured at the time of distribution of project ICS dissemination
Reported value:	NA
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	The project uniquely identified that each ICS distributed with unique identification serial number. VVB has confirmed from customer agreements during the desk review and onsite visit and deemed acceptable
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data	NA

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
Data / Parameter: **(as in monitoring plan of PDD):**	Presence of stove stacking
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	NA Each of the household sampled was found using only 1 project ICS. No households were found using baseline stoves in parallel to project ICS
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, Usage Survey has been reviewed by the VVB
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA

If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB has confirmed that each household has only one project stoves during the desk review and onsite visit.
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?	NA
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
Data / Parameter: (as in monitoring plan of PDD):	Quantity of fuel that is consumed in project scenario p during year y ($P_{p,y}$)
Measuring frequency/Time Interval:	Updated every two years, or more frequently
Reporting frequency:	Updated every two years, or more frequently
Reported value:	0.2196 kg/person-meal/day
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, Project Performance Field Tests has been reviewed by the VVB
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or	The equipment's used for conducting Project KPTs were newly purchased at the time of use, so measurements were done with the necessary guarantees. The detail of monitoring equipment is given below:

<table>
<tr><td>national standards / manufacturers specification</td><td>
<table>
<tr><th colspan="3">Equipment used for conducting KPT</th></tr>
<tr><th>Specifications</th><th>Digital Weighing Scale</th><th>Digital Moisture Meter</th></tr>
<tr><td>Manufacturer</td><td>AND</td><td>Octopass</td></tr>
<tr><td>Model/Serial No.</td><td>FKS series</td><td>MD 814</td></tr>
<tr><td>No. of units</td><td>4</td><td>4</td></tr>
<tr><td>Accuracy</td><td>1g</td><td>1%</td></tr>
</table>
</td></tr>
<tr><td>Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?</td><td>Yes. The exact calibration interval has not been provided in the registered PDD. However, since all equipment are newly purchased before the KPTs and are factory calibrated prior to use, the selected frequency represents good monitoring practice.</td></tr>
<tr><td>Company performing the calibration(internal or external calibration):</td><td>NA</td></tr>
<tr><td>Did calibration confirm proper functioning of monitoring equipment? (Yes / No):</td><td>NA</td></tr>
<tr><td>Is (are) calibration(s) valid for the whole reporting period?</td><td>NA</td></tr>
<tr><td>If applicable, has the reported data been cross-checked with other available data?</td><td>NA</td></tr>
<tr><td>How were the values in the monitoring report verified?</td><td>VVB has confirmed that 0.2196 Kg/person-meal/day quantity of fuel is consumed in project scenario p during year y during the desk review and on site visit.</td></tr>
<tr><td>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?</td><td>Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place. The data has been cross-checked with the KPT records documents /11/. For the number of meals parameter, KPT have been performed and this has been checked by the verification team with the related spreadsheets/11/. Furthermore, the verification team has cross checked all the raw data input records in the KPT calculation spread sheets including the calculation procedure for the sampled households and found them to be correct in line with KPT protocol V3/05/. All the raw data forms for the KPT carried out for this parameter were checked by the verification team/11/. Verification team has checked sampled 8 project households in which KPT were carried out for this parameter and found that KPT was carried was properly for these households.</td></tr>
</table>

	<table><tr><th>Kg/Person-meal/day assessment</th><th>Project KPT</th></tr><tr><td>Number of Samples</td><td>33</td></tr><tr><td>Median</td><td>0.2113</td></tr><tr><td>Quartile (Q1)</td><td>0.20034</td></tr><tr><td>Quartile (Q3)</td><td>0.24502</td></tr><tr><td>IQR</td><td>0.0447</td></tr><tr><td>Upper Quartile limit</td><td>0.3120</td></tr><tr><td>Lower Quartile limit</td><td>0.1333</td></tr><tr><th>90-10 Precision Assessment</th><th>Project KPT</th></tr><tr><td>Average consumption (kg/person-meal/day)</td><td>0.2196</td></tr><tr><td>Standard Deviation</td><td>0.0329</td></tr><tr><td>CV^2</td><td>2.24%</td></tr><tr><td>Coefficient Of variance (CV)</td><td>14.98%</td></tr><tr><td>Lower Bound value of confidence interval</td><td>0.2101</td></tr><tr><td>Upper Bound value of confidence interval</td><td>0.2290</td></tr><tr><td>Confindece interval</td><td>0.019</td></tr><tr><td>Precision (2-sided)</td><td>4.29%</td></tr><tr><td>90-10 Rule Met?</td><td>YES</td></tr></table>
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
Data / Parameter: (as in monitoring plan of PDD):	Specific fuel savings for an individual project technology of baseline b/project p pair in year y ($SFS_{b,p,y}$)
Measuring frequency/Time Interval:	Updated every two years, or more frequently
Reporting frequency:	Updated every two years, or more frequently
Reported value:	0.0068 tonnes/household/day
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. Calculated as $SFS_{b,p,y}$ = $(P_{b,y}-P_{p,y})$*(person-meal/household) The PP has distributed of one ICS unit per household
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the	NA

accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB has confirmed through review of the calculation in emission reduction sheet /02/ that the specific fuel savings for an individual project technology of baseline b/project p pair in year y is 0.0068 tonnes/household/day for wood.
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. The specific fuel savings obtained in the monitoring period reflects a reduction of 66.50 % in fuel consumption from baseline to project scenario which is less than the reduction of 71.23% achieved with the project's rated efficiency of 40%/03/ and the baseline efficiency of 11.51%/22/ calculated in PDD /B03/ using WBT. The same is verified by verification team from Baseline and Project KPT Results Comparison sheet/21/.

	<table><tr><th>Kg/Person-meal/day assessment</th><th>Project KPT</th><th>Baseline KPT</th></tr><tr><td>Number of Samples</td><td>33</td><td>33</td></tr><tr><td>Median</td><td>0.2113</td><td>0.6547</td></tr><tr><td>Quartile (Q1)</td><td>0.20034</td><td>0.59049</td></tr><tr><td>Quartile (Q3)</td><td>0.24502</td><td>0.70961</td></tr><tr><td>IQR</td><td>0.0447</td><td>0.1191</td></tr><tr><td>Upper Quartile limit</td><td>0.3120</td><td>0.8883</td></tr><tr><td>Lower Quartile limit</td><td>0.1333</td><td>0.4118</td></tr><tr><th>90-10 Precision Assessment</th><th>Project KPT</th><th>Baseline KPT</th></tr><tr><td>Average consumption (kg/person-meal/day)</td><td>0.2196</td><td>0.6554</td></tr><tr><td>Standard Deviation</td><td>0.0329</td><td>0.1032</td></tr><tr><td>CV^2</td><td>2.24%</td><td>2.48%</td></tr><tr><td>Coefficient Of variance (CV)</td><td>14.98%</td><td>15.75%</td></tr><tr><td>Lower Bound value of confidence interval</td><td>0.2101</td><td>0.6258</td></tr><tr><td>Upper Bound value of confidence interval</td><td>0.2290</td><td>0.6850</td></tr><tr><td>Confindece interval</td><td>0.019</td><td>0.059</td></tr><tr><td>Precision (2-sided)</td><td>4.29%</td><td>4.51%</td></tr><tr><td>90-10 Rule Met?</td><td>YES</td><td>YES</td></tr><tr><td>Detectable Difference In means</td><td colspan="2">66.50%</td></tr><tr><td>Pooled CV</td><td colspan="2">15.37%</td></tr></table> The actual results of the project's specific fuel savings thus align with the stipulated requirement of cross checking the actual saving with that obtained with respect to the rated project ICS efficiency and baseline efficiency. No capping required.
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
Data / Parameter: **(as in monitoring plan of PDD):**	Weighted average usage rate in project scenario p during year y ($U_{p,y}$)
Measuring frequency/Time Interval:	At least annual or more frequently
Reporting frequency:	At least annual or more frequently
Reported value:	90%
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval:	NA

Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	Project survey records.
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. Usage survey was conducted in line with Requirements and Guidelines: Usage Rate Monitoring It has been ensured that a statistically valid proportion of users actively using the project technology for each project technology age cohort is covered in the usage surveys as per para 4.1.8 of the methodology/B02/. It is in compliance with the general requirements for sampling and general requirements for QA/QC. Average age of samples covered under monitoring survey for age 0-1 is > 0.5 years at the end of monitoring period. PP has demonstrated use of usage rate guidelines in MR/01/ which is assessed by verification team and found to be acceptable to verification team. The Verification Team noted that usage rate is higher than 90%, whereas for emission reduction assertion PP has used a conservative value of 90% and fulfils requirements pertaining to “Good Practice” as per REQUIREMENTS

	AND GUIDELINES: USAGE RATE MONITORING, Version 2.0. Total number of usage survey samples for age 0-1 is 111 which is higher than minimum 30 sample requirement. The Mandatory Monitoring Requirements and Good Practice Monitoring requirements being elaborated in MR/01/ by PP, the same is found to be appropriately followed by PP to verification team.
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
Data / Parameter: **(as in monitoring plan of PDD):**	Number of project technology-days included in the project database for baseline b/project p pair in year y ($N_{b,p,y}$)
Measuring frequency/Time Interval:	annually
Reporting frequency:	annually
Reported value:	**Year** / **Value** 2022 / 1,331,438 2023 / 20,922,391
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.

Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB has reviewed the project database/07/ and deemed acceptable.
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. It is calculated from the Project database/07/ as the sum of the number of project technology unit times the calendar days during the year y that they were present at the end user locations. The results of the usage survey/10/ were checked with the contents of the project database/07/ to confirm whether the project technology units surveyed are present at end user locations as expected, or not. No discrepancy was found.
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

SDG 1

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Average household savings due to decrease in expenditure on basic service due to adaptation of project technology in project i.e., reduction in expenditure on purchased fuel for cooking in project ($HHS_{Project}$)
Measuring frequency/Time Interval:	Annual / Biennial
Reporting frequency:	Annual / Biennial
Reported value:	7,071 Taka/year
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA

Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB interviewed the end users and could confirm savings due to reduction in expenditure on purchased fuel for cooking in project. VVB has reviewed the ex-post monitoring survey and deemed acceptable.
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
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

SDG 4

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of PDD):	Number of employees (full-time, part-time, or temporary), by gender who received training services of any type via project during the concerned monitoring period in project ($ET_{Project}$)

Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	240
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB interviewed the PP representative and could confirm the number of training provided to the employees through training record/16/. VVB has reviewed the ER sheet /02/ and deemed acceptable.
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
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

SDG 5

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Average time saving, associated with cooking and/or fuel collection time, due to adoption of project technology in project ($ATS_{Project}$)
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	1.67 Hrs/HH/day
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	The average time saving, associated with cooking and/or fuel collection time, due to adoption of project technology in project has been confirmed through Ex-post monitoring survey/10/ and VVB on site visit interview with the end users.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data	Yes

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

SDG 7

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Number of beneficiaries household provided access to Improved cook stoves in Project ($HHB_{Project}$)
Measuring frequency/Time Interval:	Continuous
Reporting frequency:	Continuous
Reported value:	125,003
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA

How were the values in the monitoring report verified?	VVB has reviewed the project database /07/ and confirms that PP has provided ICS to 125,003 households in project scenario for this monitoring period.
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?	NA
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
Data / Parameter: **(as in monitoring plan of PDD):**	% of households having access to clean fuels and/or technologies for domestic cooking in project (% of operating ICS units in Project) ($ACS_{Project}$)
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	90%
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA

Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB through on site visit could confirm 100% ICS are in operation , bus as per the GS usage rate guideline PP has applied 90%.
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?	NA
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

SDG 8

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Total number of employees by employment contract and employment type as a result of project activity in Project, by gender ($EECT_{Project}$)
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	240 Male: 172 Female: 68
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: **Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification**	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD	NA.

does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	VVB through review of employment records /09/ and interview with the PP representative onsite could confirm on the number employment provided for this project during this monitoring period.
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?	NA
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

SDG 15

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: **(as in monitoring plan of PDD):**	Total amount of non-renewable wood fuel consumed in Project ($FC_{Project}$)
Measuring frequency/Time Interval:	Updated every two years, or more frequently
Reporting frequency:	Updated every two years, or more frequently
Reported value:	0.07 TonnesNRB/person-meal/year
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes,
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA

Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	NA
How were the values in the monitoring report verified?	PP has calculated this monitoring parameter using value of $P_{p,y}$ and $f_{NRB,i,y}$.
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. PP has appropriately calculated this monitoring parameter using value of $P_{p,y}$ and $f_{NRB,i,y}$.
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