Verification and Certification report form for GS PoA	
BASIC INFORMATION	
Title and GS reference number of the PoA	PoA Title: Dissemination of Improved Cookstoves in India by Greenway GS Ref. No: GS 10818
Reference Number	GS Ref. No: GS 10818
GS Version	GS4GG
Scale of the project activity	☐ Large-scale ☒ Small-scale
Version number of the verification and certification report	3.0
Completion date of the verification and certification report	13/11/2024
Monitoring period number and duration of this monitoring period	MP 01 (VPA#27-34) MP 02 (VPA#16-26) MP 03 (VPA#01-15) Duration of monitoring period: 01/06/2023 to 31/05/2024
Version number of the monitoring report to which this report applies	4.0
PoA Crediting Period	14/05/2020 – 13/05/2025
Coordinating/managing entity (CME)	Greenway Grameen Infra Pvt Ltd
Host Party	India
Applied methodologies and standardized baselines	AMS.II.G, version 12
Sectoral scopes	Sectoral Scope 03
SDG Impact Certified	**SDG 03:** Good Health and Well Being — Decrease in Mortality rate attributed to household and ambient air pollution: 53% **SDG 05:** Gender Equality — Time spent collecting fuelwood from the forests and for cooking: 2.33 hours/week/household **SDG 07:** Affordable and Clean energy — Number of project households predominantly using clean cooking devices such as improved cook stoves: 515,859 households

	SDG 08 [1] : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Employment generated for men & women on equal salaries: 101 employments (VPA02-VPA15) and 115 (VPA16-VPA 34)
	SDG 13: Climate Action	Emission Reductions: 1162630 tCO_2e[2]
Name of the VVB	4K Earth Science Private Limited	
Name, position and signature of the approver of the verification and certification report	 Chandrakala R Director	

[1] The SDG 08 is applicable to the VPAs (VPA 02-VPA 15)

[2] These emission reductions are combined emission reductions for the current monitoring period (01/06/2023 to 31/05/2024) and the month of May 2023. The detailed information is provided in the below sections of the Report.

SECTION A. Executive summary

4K Earth Science Private Limited (4KES) has been commissioned by "Greenway Grameen Infra Pvt Ltd" to perform an independent verification of its registered GS PoA "Dissemination of Improved Cookstoves in India by Greenway", GS Ref # GS10818 for the reported GHG emission reductions for the given monitoring period 01/06/2023 to 31/05/2024 (both dates included). The GS projects must undergo independent third party verification and certification of emission reductions as the basis for issuance of Gold Standard Verified Emission Reductions (GS VERs).

The VPAs included in the GS PoA (GS10818) and considered for this verification are:

- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA001 (GS 10821)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA002 (GS 10825)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA003 (GS 11218)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA004 (GS 11309)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA005 (GS 11310)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA006 (GS 11311)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA007 (GS 11312)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA008 (GS 11313)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA009 (GS11628)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA010 (GS11629)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA011 (GS11630)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA012 (GS 11631)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA013 (GS11632)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA014 (GS11633)
- VPA 15: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA015 (GS11634)
- VPA016: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA016 (GS 12123)
- VPA017: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA017 (GS 12124)
- VPA018: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA018 (GS 12125)
- VPA019: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA019 (GS 12126)
- VPA020: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA020 (GS 12127)
- VPA021: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA021 (GS 12128)

- VPA022: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA022 (GS 12129)
- VPA023: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA023 (GS 12130)
- VPA024: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA024(GS 12131)
- VPA025: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA025 (GS 12132)
- VPA026: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA026 (GS 12141)
- VPA027: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA027 (GS12364)
- VPA028: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA028 (GS12365)
- VPA029: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA029 (GS12366)
- VPA030: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA030 (GS12367)
- VPA031: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA031 (GS12368)
- VPA032: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA032 (GS12369)
- VPA033: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA033 (GS12370)
- VPA034: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA034 (GS12371)

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The PoA has been implemented and operated as per the registered PoA-DD/4/ & validated VPA-DDs/3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report conforms with the requirements of the approved monitoring plan and the approved monitoring methodology/8/;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.

Scope:

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on review of monitoring report, supporting information and

(a) The registered GS PoA-DD /4/, validated GS VPA-DDs/3/
(b) The approved methodology (AMS II.G, version 12)/8/
(c) The registered monitoring plan
(d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board
(e) Applicable GS4GG guidance
(f) CDM Validation and Verification Standard (VVS) & Project Standard (PS)/22/
(g) All information and references relevant to the project activity's resulting in emission reductions
(h) Information related to monitoring of SDG parameters

The project is assessed against the requirements of the Gold Standard for Global Goals requirements/23/ and related rules and guidance.

4KES has based on the recommendations in the latest version of CDM Validation and Verification Standard & GS4GG Rules and Requirements, employed a rule-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

Description of PoA:
The purpose of the VPAs is the distribution of improved cook stoves (ICS) to households within Karnataka. The improved cook stoves are energy efficient than the baseline traditional cook stoves. Due to the higher efficiency, the improved cook stove reduces the usage of non-renewable biomass in cooking and thereby, it avoids the related CO_2 emission from the use of non- renewable biomass.

Each VPA from VPA 01 to VPA 33 has distributed 15,500 ICS in Karnataka and VPA 34 has distributed 8,143 ICS till the end of monitoring period. In total 519,643 ICS were sold till the end of monitoring period.

Methodology:
4KES follows a rule based verification approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. Subsequently, after the contract is signed, the Gold Standard Verification team is assigned for the verification of project activity.

A desk review of the project documentation is undertaken, which is followed by site visit and interviews by the members of verification team in accordance with the latest version of CDM AS. The verification protocol is filled by the verification team that is based on standard auditing practices and latest version of CDM VVS, to capture the assessment of applicable CDM & GS requirements viz., latest version of CDM Project Standard for PoAs, applicable GS4GG guidelines, registered GS4GG PoA-DD, validated VPA-DDs, applied methodology/ies and/or tools and recent decisions. The verification protocol provides transparent means to record the observations and compliances by the verification team members and the nonconformities (CARs/CLs), if any. The verification protocol is an internal document, and is available on request. After successful closure of findings (CARs/CLs), the draft verification report is prepared which went through Independent technical review as per 4KES internal procedures and the TR comments were given for any gaps in audit findings. After closure of the TR comments, final verification report is prepared then followed by final approval for the decision made. The approved verification report is given to PP which shall be submitted for request for issuance.

Following are the major milestones for the verification under consideration.

Verification contract	14/03/2024
Site visit	11/06/2024 to 18/06/2024
Draft Verification Report	03/07/2024
Final Verification Report	13/11/2024

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member[3]

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader,	EI	Kumar	Narendra	Central Office				

[3] The validation was conducted by the same VVB (4KES) which conducted the current verification. However the verification team during the current verification is totally different from the previous validation team ("Rohit Badaya as Team Leader, Technical Expert, Local Expert" and MP Kanal as Technical Reviewer), hence it is inline with the requirements of the para 6.8.1 of the Validation and Verification Standard, v1.0.

	Technical Expert (TA 3.1) and Local Expert					✓	✓	✓	✓
2	Team Member and Local Expert	IR	Acharya	Swati S	Central Office	✓	✓	✓	✓

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical Reviewer	IR	Puratchikkanal	Ma Paa	Central Office
2	Approver	IR	R	Chandrakala	Central Office

SECTION C. Application of materiality

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.	Wrong data collection/misinterpretation of household situation	Low	It's not complicated monitoring process. Appropriate trainings are conducted for the monitoring personnel.	By means of site visit check of actual situation to sample number of households.
2	Transfer of data from sampling survey sheet to monitoring database	Low	Possible human error during transfer of data to monitoring database	Thorough cross-check required on the transfer of data from survey sheets to the monitoring database sheet
3	Error in transferring the recorded data to ER sheet	Low	Since the process of transferring data from monitoring database to ER calculations sheets is done mostly though copy & paste, there is a very less chance of discrepancies.	Consistency between monitoring database and ER sheet to be checked.
4	Error in ER calculations	High	The sample size was large, hence increasing the chances of error in ER calculation	The ER calculations were checked for accuracy.

C.2. Consideration of materiality in conducting the verification

The prescribed thresholds for materiality, as per VVS for PoAs.

Prescribed range of ERs/annum	500,000+	300,000+ to 500,000	300,000	SSC Pas	MSC Pas
Prescribed Threshold	0.5%	1.0%	2.0%	5.0%	10.0%

The identified/selected materiality threshold for the project activity under current monitoring period is 5% as project activity is a small-scale PoA with one VPA already registered.

	MR Version (Draft)	MR Version (Final)
Emission reductions/monitoring period	1,207,094 tCO_2e	1,162,630 tCO_2e

Identified Threshold	5.0%	5.0%

The impact of errors observed during verification for each monitoring parameter on the emission reduction calculation is provided below:

Parameter	**Verification approach**	**Error identified**	**Corrected**	**Within Threshold**
Number of project devices of type I and age a that are operating in year y ($N_{y,i,a}$)	Complete data check in database	No error identified	NA	Yes
Efficiency of the device (Stove) of each type i and batch j implemented as part of the project activity ($\eta_{new,i,j}$)	Sample survey data check & acceptance survey	No error identified	NA	Yes
Adjustment to account for any continued use of pre-project devices during the year y (μ_y)	Sample survey data check & acceptance survey	Error identified, which was subsequently corrected during the course of verification	Yes	Yes
Life Span	Sample survey data check	No error identified	NA	Yes
Date of commissioning of project device i	Sample survey data check & acceptance survey	No error identified	NA	Yes
Number of project devices distributed per household ($N_{d,HH}$)	Sample survey data check & acceptance survey	No error identified	NA	Yes
Air Quality	Sample survey data check & acceptance survey	No error identified	NA	Yes
Time Saving per household in collecting fuelwood (Number of Hours)	Sample survey data check & acceptance survey	Typo error identified, which was subsequently corrected during the course of verification	Yes	Yes
Number of employments generated (Ne)	Sample survey data check & acceptance survey	Typo error identified, which was subsequently corrected during the course of verification	Yes	Yes
Number of ICS under the project	Sample survey data check & acceptance survey	No error identified	NA	NA

The change in the actual impacts related to the adjustment to account for any continued use of pre-project devices during the year y, time savings and number of employments between draft and final MR is due to the error identified in the monitoring report. Please refer the CARs & CLs raised in the Appendix 4.

SECTION D. Means of verification

D.1. Desk/document review

The verification is performed primarily as a desk review of the documents submitted at various stages of assessments. The review is performed by assessment team using verification protocols (checklists). The assessment team cross-checked the information provided in the MR and information from sources other than those used, if available, and also conducts independent background investigations. 4KES conducted a desk review, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- A review of calculations and assumptions made in determining the GHG data and emission reductions
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'Appendix 3' of this report.

D.2. On-site inspection

Duration of on-site inspection: 11/06/2024 to 18/06/2024				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Opening Meeting, Office Inspection, Verification of monitoring records, interviews and database inspection	Bangalore, Karnataka	11/06/2024	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)
2.	Visit to sample of households	Beneficiary households at various locations in Karnataka	11/06/2024 to 18/06/2024	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)
3	Closing Meeting	Bangalore, Karnataka	18/06/2024	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	G	Indu	State Head-Sales, Greenway	11/06/2024 to 18/06/2024	- General aspects of the project - Changes since validation / previous verification - Remaining issues from validation/ previous verification - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan	Narendra Kumar, Swati S Acharya (on-site visit in Karnataka)
2.		Savitha	Field Officer, Greenway			
3.	Gowda	Umesh	SO, Greenway			
4.	Revappa	Ramesh	ASO, Greenway			
5.	Mallur	Basavraj	Incharge, , Greenway Warehouse			
6.		Vishwanath	Dispatched Executive, Greenway			
7.	Yatinamae	Umesh	Housekeeping, Greenway Warehouse			

8.	Kath	Manjunath	Delivery Incharge, Greenway		- Monitoring data management - Data uncertainty and residual risks - Procedural aspects of the Monitoring - Maintenance - Data analysis - Issues in the MR - ER calculation - Roles and responsibilities - Data collection - Carbon Rights - Sustainable Development parameters - Grievance Mechanism - Sales and distribution methods, trainings received, training to user, CER rights, sales receipts, how to use, usage etc.	
9.	Naik U.	Manju	ASM, Greenway			
10.	K. B	Charan Kumar	Incharge, Greenway Warehouse			
11.		Annapurna	Field Officer, Greenway			
12.		Gopal	Field Officer, Greenway			
13.	L H	Gavish	Field Officer, Greenway			
14.	S.D	Mallikarjun	Field Officer, Greenway			
15.	Kumar P	Kiran	ASM, Greenway			
16.	BC	Raghavendra	Field Officer, Greenway			
17.		Kemparaju	Field Officer, Greenway			
18.		Sunil Kumar S	Field Officer, Greenway			
19.	H.C	Santhosh	Field Officer, Greenway			
20.	S	Girish Kuar	Field Officer, Greenway			
21.	MR	Raju	Field Officer, Greenway			
22.	Pujari	Manjunath	Field Officer, Greenway			
23.		Kavitha	Field Officer, Greenway			
24.	Ragi	Sunil Kumar	Field Officer, Greenway			
25.	Gowda	Chandrashekar	Field Officer, Greenway			
26.		Santosh D	Field Officer, Greenway			
27.		Manju H.N.	Field Officer, Greenway			
28.	D. K.	Samrat	Field Officer, Greenway			
29.	M.A	Vinayaka	A.S.M, Greenway			
30.		Prabhakar	Field Officer, Greenway			
31.		Parmeshwar	Field Officer, Greenway			
32.	MB	Shankar	Field Officer, Greenway			
33.		Muni	SKDRDP (stakeholder)			
34.	Banu	Shahin	SKDRDP (stakeholder)			
35.		Sakamma	SKDRDP (stakeholder)			
36.	Banu	Kuthej	SKDRDP (stakeholder)			
37.	Banu	Salma	SKDRDP			

			(stakeholder)			
38.	Banu	Guljar	SKDRDP (stakeholder)			
39.	Salma	Umed	SKDRDP (stakeholder)			
40.	Banu	Shaheen	SKDRDP (stakeholder)			
41.		Shahanj	SKDRDP (stakeholder)			
42.		Beshma	SKDRDP (stakeholder)			
43.		Kairinisa	SKDRDP (stakeholder)			
44.		Umenysa	SKDRDP (stakeholder)			
45.		Rukasna	SKDRDP (stakeholder)			
46.		Zareena	SKDRDP (stakeholder)			
47.		Geetha	SP, SKDRDP			
48.		Shuvakumar	FS, SKDRDP			
49.	G D	Prashanth	ASO, Greenway			
50.		Anjinappa	Field Officer, Greenway			
51.	Heggappagol	Gopal Suresh	Field Officer, Greenway			
52.	Saraf	Saurabh	Director, Offset Farm Pte. Ltd.	21/06/2024	1. Monitoring Report and Implementation 2. Implementation of the monitoring plan 3. Sample survey 4. Data analysis 5. Issues in the Monitoring report 6. Roles and responsibilities 7. Applicability of the methodology 8. Emission reduction 9. Identification of users, Sales and distribution methods, trainings received, training to user, CER rights, sales receipts, How to use, usage etc. 10. Data collection 11. Monitoring Surveys 12. Safeguarding principles, 13. Project scenario, 14. Grievance mechanism	Narendra Kumar, Swati S Acharya (through Google meet)
53.	Mathur	Ankit	Director, SDG13 Ventures Pte Ltd			
54.	Pavithran	Shiji	CRO, Greenway			
55	Banerjee	Sudipta	VP-Supply Chain, Greenway			
56	K	Shanikant	Senior Design Engineer, Greenway			
57	Kumar	Spandan	Carbon Associate, OffsetFarm			
58	Kazi	Shoeb	COO, Greenway			

Interviews with the households related to Monitoring/Usage survey:

No.	Household name	ICS Serial number	Subject	Team member
1	Lakkawa Kannur	J20VF018575	• Verification of data collected through sample survey • Awareness about ownership of CERs • Working condition of ICS unit • SDG parameter verification	Narendra Kumar, Swati S Acharya (on-site visit in Karnataka)
2	Neelam	J20VF027518		
3	Prema	J20VH060211		
4	Manjula	J20VI082994		
5	Renuma	J20VJ104232		
6	Shajadi	J20VJ100740		
7	R. Ratnam	J20VK107267		
8	Manjula	J20VK117933		
9	Bindu	J21VA173476		
10	Puttamma	J20VL144936		
11	Malamma	J21VA171968		
12	Ashwini	J21VC203807		
13	Alib Asha	J21VB190594		
14	Leelavathi	J21VD015347		
15	Ashwitha MS	J21VG034968		
16	Netravati Manjunath S	J21VH045246		
17	Chowdamma	J21VH062492		
18	Saundarya	J21VI072480		
19	Parvathamma	J21VJ093487		
20	Geetha	J21VK118874		
21	Hamsashreegr	J21VJ108124		
22	Indrani	J21VL132362		
23	Gulabi	J21VJ107447		
24	Bharati	J22VB169439		
25	Manjula	J22VB191872		
26	Nagratna Nappa	J22VD012638		
27	H. Laxmi	J22VE025053		
28	Latha	J22VF072043		
29	Gurubhai	J22VF075618		
30	Dayananda KN	J22VG093426		
31	Roopa	J22VG117960		
32	Puttamma	J22VH148442		
33	Vasanth	J22VI180815		
34	Shilpa	J22VI171215		
35	Rekha Praveen	J22VI205302		
36	Bhagyamma	J22VI199807		
37	Gulabi	J22VJ226075		
38	Laleethamma	J22VK286462		
39	Laxmi Balappa Jogi	J22VJ231507		
40	Vanjakshi	J23VA385477		
41	Savakka S Harigan	J23VA396946		
42	Gulzar Bano	J23VD029537		
43	Shree Devi	J23VE045772		
44	Vijayalakshmi	J23VE065395		
45	Sidamma	J23VH166859		
46	Mahadevi	J23VF083349		
47	Sangeeta	J23VH194974		
48	Padmamma	J23VI221246		
49	Laxmi Devi	J23VJ243065		
50	Manjula	J23VI227365		
51	Anita N	J23VK268928		
52	H Manjumma	J23VJ263122		

Verification team cross verified parameters which are monitored through acceptance samples survey. Apart from acceptance sample survey the verification team asked additional questions to the households. The additional questions asked by the verification team and the general reply received from the stakeholders are given below:

Questions asked by verification team	**Summary of response by stakeholders/end users**
Name of the household representative, address of the location, their mobile number	Interviewed with the household representative
Is the ICS system in operating condition?	All end users confirmed the ICS system in operating condition now. The same was also confirmed through looking the ICS
Main source of cooking fuel in technology	The wood fuel is mainly used in the technology
Whether LPG is used for cooking. If yes, how frequently it is used for cooking	The LPG usage has been reported in some of the households involved in the PoA The LPG is not frequently used and used in the case of emergency purposes as confirmed through number of LPG cylinders used in a year.
The details related to the Baseline technology and Baseline fuel were asked.	Three stone stove is the baseline technology and wood was the baseline fuel
Stove serial number printed on the ICS	Checked through looking at the side surfaces of the ICS
Are you aware that the project claims emission reduction and the ownership of the ERs are with Greenway Grameen Infra Pvt Ltd?	All the end users are aware that all the rights of emission reduction are with Greenway Grameen Infra Pvt Ltd as the ICS.
Is there any repairs done to your ICS stove?	Almost all the households confirmed that the ICS was operating since purchased date without any repairs.
If you have any issue with the device/project, you contact whom?	All households confirmed that they have the contact number of the respective area field officer and for any requirement they can contact the field officer.
Is indoor smoke reduced due to the use of ICS unit?	All the households confirmed reduction in the indoor smoke and thereby reduction in health issues i.e, eye related issues, respiratory issues.
Is cooking time reduced due to use of ICS unit?	All the households confirmed reduction in cooking time.
Is the consumption of fuel decreased since purchasing the ICS and hence lead to any money savings?	All the households confirmed reduction in the consumption of fuel and hence money savings.
Are you trained by the Greenway team?	All households confirmed they have received training from Greenway
What are the other benefits of ICS unit?	The summary of the other benefits mentioned by households are: • Easy cooking • Reduction in fuelwood collection time & cooking time

	• Clean home • Clean vessel • Better lifestyle • Money savings
Do you have any issue with the project?	No households mentioned any issues with the project.

No risks were identified during the site visit and all the interviews were sufficiently conducted in order to conclude on the verification of the 34 VPAs under the PoA. There were no aspects identified, which needs to be further audited during the next verification.

D.4. Sampling approach

Due to the large number of ICS installed under the VPAs, it was not economically feasible to monitor each individual ICS unit installed, therefore, a representative sampling was undertaken for the ICS installed in the households. PP has proposed simple random sampling using 95/10 as confidence/precision for monitoring the parameters. This is inline with the applied methodology and Sampling Standard.

The monitoring parameters monitored through the sampling plan are:
1. Number of project devices of type i and age a that are operating in year y.
2. Efficiency of the device (ICS) of each type i and batch j implemented as part of the project activity
3. Adjustment to account for any continued use of pre-project devices during the year y
4. Users' perception on smoke reduction and Incidence of disease: perceived smoke levels, incidence of coughing, incidence of respiratory illness, Incidence of itchy eyes
5. Time Saving per household in collecting fuelwood
6. Number of ICS under the project

The objective of the sampling is to obtain an unbiased and reliable estimate of the proportion or mean value of the parameters over the course of the monitoring period, and with 95/10 confidence/precision.
The target population is the total ICS population served under the project (and covered under the monitoring report), and the sampling frame consists of aggregated data of end-users of the ICS as recorded in the project database. The 272 samples/18/ were used for determining the parameters through sample survey.

VVB Sampling approach:
For the SDG parameters monitored though sampling, verification team used acceptance sampling approach. During the site visit a sampling approach has been used by the verification team to verify the reported values for the SDG parameters which are determined through sample survey. Verification team has determined acceptance sample size for all the sample survey parameters based on the table provided under para 28-33 of standard "Sampling and surveys for CDM project activities and programmes of activities" version 9/24/.

Parameters	Producers risk	Consumers risk	AQL	UQL	Sample size	Acceptance Number
SDG Parameters monitored through sample survey	5%	10%	1.0%	10%	52	2

During the on-site verification a sampling approach has been used by the verification team to verify the reported values for the monitored parameters in the MR. The sampling approach included households which have been included in the monitoring survey by the CME. Accordingly, the verification team verified a total of 52 Samples as per the details provided in Section D.3 above observed that the sampling survey results of the PP for all the HHs checked were found to be correct and hence acceptable.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General	-	-	-
Compliance of the monitoring report with the monitoring report form	-	02	-
Remaining forward action requests from validation and/or previous verifications	-	-	01
VPAs considered for verification and covered in this report		-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents[4]	-	-	-
• Changes to the programme design	-	-	-
• Addition of VPA inclusion template	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities	-	-	-
Compliance of the VPA implementation with the included VPA design document	01	01	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	-	-	-
• Corrections	-	-	-
• Changes to the start date-of the crediting period	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	-	-	-
• Changes to the project design	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	01	-
• Data and parameters monitored	01	01	-
• Implementation of sampling plan	01		-
Compliance with the calibration frequency requirements for	-	-	-

[4] 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).

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
measuring instruments			
Assessment of data and calculation of emission reductions or net removals	-	-	-
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	01	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-		-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included VPA	-	02	-
• Remarks on difference from estimated value in included VPA	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Input and Grievance Mechanism	01	-	
Total	05	07	01

SECTION E. Verification findings

E.1. General

E.1.1. Compliance of the monitoring report with the monitoring report form

Means of verification	PP used GS monitoring report template, version 1.1 which is a valid version. All the sections of the form were filled as per the GS4GG guidelines/27/ and gave all the relevant details.
Findings	CAR 01, CAR 02 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The monitoring report is prepared based on the version 1.1 of GS4GG monitoring report template/27/ which is valid at the time of assessment. All sections of the MR is filled correctly.

E.1.2. Remaining forward action requests from validation and/or previous verifications

Means of verification	This is the 3rd verification of the PoA. The Verification report and Performance Review report of the 2nd Verification period and GS Design Certification Review Report of the inclusion of VPAs (VPA#027 to VPA#034) has been checked. The FARs have been raised during the GS Design Certification Review process of the inclusion of VPAs (VPA#027 to VPA#034), which has been discussed in the current verification.
Findings	FARs were raised during the GS Design Certification Review process of the inclusion of VPAs (VPA#027 to VPA#034) and the same is addressed during the current verification. Refer Appendix 4 for more details.
Conclusion	There are no forward action requests pending and all the FARs have been addressed in the current verification.

E.1.3. VPAs considered for verification and covered in this report

Title and reference number of the VPA included in the PoA as of the end of this monitoring period	Is the VPA considered for this verification? (yes/no)	Version of the GS PoA-DD/4/
1. VPA 01: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved	Yes	Version 5.1

Cookstoves in Karnataka by Greenway – VPA001 (GS 10821) 2. VPA 02: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA002 (GS 10825) 3. VPA 03: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA003 (GS 11218) 4. VPA 04: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA004 (GS 11309) 5. VPA 05: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA005 (GS 11310) 6. VPA 06: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA006 (GS 11311) 7. VPA 07: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA007 (GS 11312) 8. VPA 08: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA008 (GS 11313) 9. VPA 09: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA009 (GS11628) 10. VPA 10: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA010 (GS11629) 11. VPA 11: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA011 (GS11630)		

12. VPA 12: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA012 (GS 11631) 13. VPA 13: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA013 (GS11632) 14. VPA 14: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA014 (GS 11633) 15. VPA015: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA015 (GS 11634) 16. VPA016: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA016 (GS 12123) 17. VPA017: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA017 (GS 12124) 18. VPA018: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA018 (GS 12125) 19. VPA019: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA019 (GS 12126) 20. VPA020: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA020 (GS 12127) 21. VPA021: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA021 (GS 12128) 22. VPA022: GS10818 – Dissemination of Improved		

Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA022 (GS 12129) 23. VPA023: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA023 (GS 12130) 24. VPA024: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA024(GS 12131) 25. VPA025: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA025 (GS 12132) 26. VPA026: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA026 (GS 12141) 27. VPA027: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA027 (GS12364) 28. VPA028: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA028 (GS12365) 29. VPA029: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA029 (GS12366) 30. VPA030: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA030 (GS12367) 31. VPA031: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA031 (GS12368) 32. VPA032: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved		

Cookstoves in Karnataka by Greenway – VPA032 (GS12369) 33. VPA033: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA033 (GS12370) 34. VPA034: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA034 (GS12371)		

E.2. Programme of activities

E.2.1. Compliance of the programme implementation with the registered programme design document

Means of verification	All the VPAs (VPA 01 – VPA 34)/6/ are registered under the PoA as confirmed through GS registry. The verification team determined the conformity of all the 34 VPAs and its operation with the validated programme design document. Verification team has, by means of a desk review and an on-site visit, assessed that all physical features of the VPAs proposed in the validated PoA-DD are in place, and that the project participants have operated the project as per the validated PoA-DD. The verification team has checked the information in the monitoring report and compared against the registered PoA-DD. During the onsite inspection, the verification team has checked the VPA locations, implementation, technology applied, project equipment, and monitoring system against the information in the registered PoA-DD. Interviews with operational personnel and households and random samplings have been carried out.
Findings	No findings raised during the verification process.
Conclusion	The verification team has reviewed the ICS systems installation documents viz. Invoices, End-user agreement between CME & end-users, and other log records. The verification team has observed at the site that all physical locations of the ICS units and found that the details are correctly matching with the monitoring report and monitoring records maintained by CME. Thus the verification team concludes that the VPAs was implemented and operated as per registered PoA-DD. The verification team, based on the site visit and document review, was able to conclude that the VPA has been commissioned and implemented as per the registered PoA-DD/4/ and that all physical features of the project are in place.

E.2.2. Implementation and operation of the management system

Means of verification	The verification team determined the implementation and operation of management system through the site visit and interviews with the CME. The verification team checked whether the actual management system implemented in accordance with the management system described in the registered PoA-DD/4/. During site visit, verification team checked the procedures implemented for inclusion of VPAs, roles and responsibilities, quality check etc.
Findings	No findings raised during the verification process.
Conclusion	The verification team confirms that the implementation and operation of the PoA management system, including the record-keeping system, complies with the registered PoA design document (PoA-DD)/4/.

E.2.3. Post-registration changes

E.2.3.1. Corrections

No corrections in the PoA-DD is sought by CME

E.2.3.2. Inclusion of a monitoring plan

Not applicable as monitoring plan is provided in the registered PoA-DD itself.

E.2.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

No permanent changes to the monitoring plan described in the PoA-DD or applied methodology is sought by CME.

E.2.3.4. Changes to the programme design

No change in programme design of registered PoA-DD is sought by CME.

E.2.3.5. Addition of CPA inclusion template

Not applicable

E.2.3.6. Change of coordination/managing entity

Not applicable

E.2.3.7. Changes specific to afforestation and reforestation activities

Not applicable

E.3. Component project activities

E.3.1. Compliance of the VPA implementation with the included VPA design document

Means of verification	The verification team determined the conformity of the VPAs and its operation with the validated VPA-DDs. Verification team has, by means of a desk review and an on-site visit, assessed that all physical features of the voluntary project activity proposed in the validated VPA-DDs are in place, and that the project participants have operated the project activity as per the validated VPA-DDs/3/. The verification team has checked the information in the monitoring report and compared against the registered VPA-DDs. During the onsite inspection, the verification team has checked the project locations, technology applied, project equipment, and monitoring system against the information in the VPA-DDs/3/. The ICS units proposed to be installed in the VPAs are 527,000 ICS (ex-ante estimate as per the VPA-DDs), however only 519,643 ICS are installed in all the VPAs till the end of monitoring period. PP has considered all the operational units for the purpose of emission reduction calculations. The CME has submitted all the distribution details of ICS in the database. The database has been checked and found the ICS distribution across all the 34 VPAs inline with the details presented in the MR. Further the random sample of households were interviewed during the site visit and the details available in the project database was found correct. Additionally, the interviews were conducted with various personnels present during the site visit and also the management

	personnels of the PoA were interviewed and the details on the ICS as per the Project Database was confirmed and found correct. The ICS distributed in the VPAs have unique ICS IDs, unique locations/address/geocoordinates and other details included in the project database. Further each of the end-user (beneficiary) has signed an agreement with Greenway, which is unique to the households which is installed in the VPAs. Hence the possibility of double counting has been totally avoided in the case of project activity. Additionally the declaration on no double counting has been submitted/12/, which is found appropriate. An agreement between "Beneficiary and Greenway Grameen Infra Pvt. Ltd." /16/ has been signed corresponding to each of the households in the VPAs. As per the agreement, households transfer all the carbon rights to Greenway Grameen Infra Pvt. Ltd generated due to the use of ICS. Further this agreement /16/ is signed by both household and the project developer. Additionally the ownership of the carbon credits was also confirmed during the site visit. Interviews with operational personnel and households and random samplings have been carried out.
Findings	CL 01, CAR03 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The verification team has reviewed the Invoices/17/, End-user agreements/16/ and other records/14/. The verification team has observed at the site that all physical locations of the ICS units and found that the details are correctly matching with the monitoring report and monitoring records maintained by CME. Thus the verification team concludes that the VPAs were implemented and operated as per the validated VPA-DDs. The verification team, based on the site visit and document review, was able to conclude that the VPAs have been commissioned and implemented as per the validated VPA-DDs and that all physical features of the project are in place.

E.3.2. Post-registration changes

E.3.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

>>
No temporary deviations from the validated VPA-DDs are sought.

E.3.2.2. Corrections

>>
No corrections in the validated VPA-DDs are sought.

E.3.2.3. Changes to the start-date of the crediting period

>>
No change in start date of the crediting period is applied.

E.3.2.4. Inclusion of a monitoring plan

>>
Not applicable as monitoring plan is provided in the VPA-DDs during the inclusion time only.

E.3.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

>>

No permanent changes to the monitoring plan or applied methodology is sought by the CME

E.3.2.6. Changes to the project design

>>
No change to the programme design of the included VPA-DDs are sought by CME.

E.3.2.7. Changes specific to afforestation and reforestation activities

>>
Not Applicable.

E.3.3. Compliance of the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	The verification team checked compliance of project monitoring plan with the applied methodology (AMS.II.G version 12)/8/. The actual procedures followed for monitoring of parameters are checked against the parameters and procedures provided in the applied methodology.
Findings	No findings raised during the verification process.
Conclusion	All parameters stated in the monitoring plan and the applied methodology has been fulfilled in the current monitoring report. All baseline emission parameters have been verified and found satisfactory. The discussion regarding each parameter has been elaborated in the further sections of this report. The monitoring plan as mentioned in the respective validated VPA-DDs are in accordance with the applied methodology. In the opinion of the verification team the monitoring report complies with the requirement of the validated VPA-DDs and applied methodology (AMS.II.G version 12)/8/ in the context of the project activity. It also conforms to the requirement of VVS for PoA, ver 03/22/.

E.3.4. Compliance of monitoring activities with the registered monitoring plan

E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification

The verification team has checked the ex-ante parameters and data stated in Section D.1 of MR and compared with the Section B.6.2 of the validated VPA-DDs whether all parameters fixed ex-ante for the crediting period have been applied correctly.

Ex-ante Parameter	Value	Consistent with the respective VPA-DDs & the source mentioned in it
$NCV_{biomass}$	0.0156 TJ/tonne	Net Calorific Value of the wood used as cooking fuel. Default value as per the applied methodology.
$B_{old,HH}$	3.83 Tonnes/household/year	The data has been derived from baseline surveys and fixed ex-ante in the validated VPA-DDs/3/ as required by the methodology.
η_{old}	10%	Default value is taken as per applied methodology, “Data/Parameter table 9 (Section 5.5)”. This is consistent with validated VPA-DDs.
fNRB,y	93.66%	State of forest report 2019/32/

			The fNRB has been calculated with the help of Tool 30 (*Calculation of the fraction of non-renewable biomass*) and found correct. The value is also consistent with the validated VPA-DDs.
	Efprojected_fossilfuel	64.40	Emission factor for the substitution of non-renewable biomass by similar consumers. Default value as per the applied methodology.
	LEy	0.95	Net to gross Adjustment Factor. Default value as per the applied methodology.
	$S_{install}$	15,500/VPA (for the VPA 01 to VPA 33) 8,143 (for VPA 34 till the end of monitoring period)	The total number of ICS installed in all the VPAs have been cross-checked with the project database and found correct.
Findings	CAR 04 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.		
Conclusion	The values of ex-ante fixed parameters have been verified from the validated VPA DDs. Same has been crosschecked with the source mentioned in the validated VPA-DDs and found to be consistent. The verification team confirms that the values used/applied are correct and justified. Also, the ex-ante values have been correctly applied in the calculation of emission reductions.		

E.3.4.2. Data and parameters monitored

Means of verification

The verification team has determined whether the registered monitoring plan has been properly implemented and followed by the CME that the monitoring has been carried out in accordance with the registered monitoring plan; and determined whether all parameters including project emission parameters, baseline emission parameters and leakage parameters used for emission reduction calculation stated in the registered monitoring plan are monitored or used appropriately as per the registered PoA-DD.

During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DDs and of registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures.

The monitored parameters and their values are assessed as follows:

Parameter	Value	Description/Assessment
Number of project devices of type I and age a that are operating in year y	515,859	From the total commissioned ICS, PP has monitored the number of project ICS in operation based on sampling survey. Based on the survey of 272 samples/18/, PP has determined the number of operating stoves during the monitoring period. The surveys for the previous monitoring period were undertaken in May-June 2023.

<table>
<tr><td></td><td></td><td></td><td>The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs.

The following samples were

<table><tr><td>Batch</td><td>Monitored sample size</td></tr><tr><td>2020-2021 (Vintage 4)</td><td>60</td></tr><tr><td>2021-2022 (Vintage 3)</td><td>58</td></tr><tr><td>2022-2023 (Vintage 2)</td><td>81</td></tr><tr><td>2023-2024 (Vintage 1)</td><td>73</td></tr></table>chosen vintage wise

Based on the monitoring surveys and calculations presented in the ERs Exelsheet, 99.3% of the total commissioned ICS were found to be in operation during the monitoring period. As the total number of installed ICS is 519,643 and the total number of ICS in operation arrives as 515,859 ICS.

The same was confirmed during the on-site visit and based on the calculations presented in the ERs Excelsheet and found correct.</td></tr>
<tr><td></td><td>$\eta_{new,i,j}$: Efficiency of the device (Stove) of each type i and batch j implemented as part of the project activity.
.</td><td>35.92%</td><td>To determine the efficiency of the stoves, Water Boiling Test (WBT)/19/ was carried out based on the statistically determined representative samples using the WBT Protocol listed by Clean Cooking Alliance. PP has conducted water boiling test of 20 ICS and confirmed through the interviews that WBT Protocol listed by Clean Cooking Alliance has been following for the WBT tests/34/. The same approach for the testing was following during the 1st and 2nd monitoring period of this PoA, which has already been</td></tr>
</table>

			accepted by SustainCERT during the previous verifications. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs. PP used the stove efficiency determined from sample stoves having vintage 1 (2023-2024), vintage 2 (2022-2023), vintage 3 (2021-2022) and vintage 4 (2020-2021). The household samples based on each of the vintages were selected. The sample size of 5 samples (vintage-1), 6 samples (vintage-2), 5 samples (vintage-3) and 4 samples (vintage-4) were finally considered (which is more than minimum of samples obtained) based on the calculations recommended by "*Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0*", which is also inline with the applied methodology/8/, hence found appropriate. Please refer to the paragraph 22 of the "Standard: Sampling and surveys for CDM project activities and programmes of activities, version 09" as per which "*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation. In the latter case, the populations of all CPAs in the group are*

			combined together, the sample size is determined and a single survey is undertaken to collect data". Hence a single sample size has been determined applying 95/10 confidence/precision for the sample size calculation, which is inline with the Sampling Standard. All the 34 VPAs have been considered in 4 age-groups and batchwise sample size has been calculated for all the 4 age groups. As the parameter is a numeric mean and minimum of 4 sample sizes arrived based on the sampling calculations, hence Student's t-distribution has been used to finally arrive at the sample size of (2, 3, 2, 2 samples). Based on the calculations presented in the "Sampling & Precision" spreadsheet, the sample size of (2, 3, 2, 2 samples) were found inline with the Sampling Standard/Guidelines. However more number of sample surveys were carried out: 5 samples (vintage-1), 6 samples (vintage-2), 5 samples (vintage-3), 4 samples (vintage-4) during the monitoring period, which is more than the minimum sample size required for each of the vintages. The average monitored efficiency of 37.68%, 36.32%, 35.22% and 34.10% were determined for the vintage-1, vintage-2, vintage-3 and vintage-4 respectively. The efficiency test sheets and the age calculation of sample stoves are checked and found correct. Hence the weighted average efficiency of the Stoves as 35.94% based on the above four vintages have been found correct. The results of the water boiling test shows that the accuracy of the result is within 5% limit. Verification team checked all the water boiling test results and found correct.

	μ_y : Adjustment to account for any continued use of pre project devices during the year y: .	0.857	It is noticed that the traditional stoves are not disposed in some of the households. If the traditional cook stoves are used for any time for complete cooking or cooking for specific items the same is monitored through the surveys. As per the monitored records, an adjustment factor of 85.7% has been applied to account for any continued use of pre-project devices during the year y and hence found correct. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been followed, which is more accurate than the biennial frequency (as recommended by the approved VPA-DDs), hence found appropriate.
	Life Span:	7 years	The lifespan of 7 years is based on the technical specifications/14/ submitted by the manufacturer. The lifetime is fixed and recorded at the time of distribution of the ICS stoves and found correct. Life of ICS is as per manufacturer specifications and this is consistent with the applied methodology.
	Date of commissioning of project device i:	-	The date of commissioning of ICS is considered as per the applied methodology requirement. The date of commissioning of project devices are found correct as per the project database and accordingly the date of commissioning is taken correctly for the project devices. The date of commissioning of project device is fixed and recorded at the time of distribution of the ICS stoves and found correct. The date of commissioning or distribution date of the ICS is

			recorded in the Sales record excelsheet. The VVB based on the ICS samples checked the distribution date of the ICS with the Invoices and found consistent.
	$N_{d,HH}$: Number of project devices distributed per household:	1 ICS	As per the project implementation database, 1 ICS is distributed in each household. This is also conservative as per the applied methodology. Further the same is fixed and recorded at the time of distribution of the ICS stoves and found correct.
	Users' perception on smoke reduction and Incidence of disease: perceived smoke levels, incidence of coughing, incidence of respiratory illness, Incidence of itchy eyes:	Positive feedback related to health and illness	As per the monitoring survey, the sample end users reported positive feedback related to health and illness compared to baseline scenario. The monitoring procedure is as per registered monitoring plan and verification team also interviewed end users who confirmed positive feedback related to health and illness. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs.
	Time Saving per household in collecting fuelwood	Positive feedback on the time savings	All sampled users reported less time consumption for fuel collection as due to the project activity less fuel is used for the same thermal needs. The monitoring procedure is as per registered monitoring plan and verification team also interviewed end users who confirmed positive feedback related to fuel collection time. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd

<table>
<tr><td></td><td></td><td></td><td>monitoring period, hence the annual monitoring frequency has been met by the VPAs.</td></tr>
<tr><td></td><td>Number of ICS under the project:</td><td>15,500/VPA (for the VPA 01 to VPA 33)

8,143 (for VPA 34 till the end of monitoring period)

Total distributed stoves till the end of monitoring period: 519,643 ICS</td><td>The total number of 519,643 ICS has been distributed till the end of monitoring period and the same has been confirmed through the sales database and during the site visit. Among them 515,859 were found operational.

The VPA-wise details are presented as follows:
<table>
<tr><td>VPA1</td><td>15,500</td></tr>
<tr><td>VPA 2</td><td>15,500</td></tr>
<tr><td>VPA 3</td><td>15,500</td></tr>
<tr><td>VPA 4</td><td>15,500</td></tr>
<tr><td>VPA 5</td><td>15,500</td></tr>
<tr><td>VPA 6</td><td>15,500</td></tr>
<tr><td>VPA 7</td><td>15,500</td></tr>
<tr><td>VPA 8</td><td>15,500</td></tr>
<tr><td>VPA 9</td><td>15,500</td></tr>
<tr><td>VPA 10</td><td>15,500</td></tr>
<tr><td>VPA 11</td><td>15,500</td></tr>
<tr><td>VPA 12</td><td>15,500</td></tr>
<tr><td>VPA 13</td><td>15,500</td></tr>
<tr><td>VPA 14</td><td>15,500</td></tr>
<tr><td>VPA 15</td><td>15,500</td></tr>
<tr><td>VPA 16</td><td>15,500</td></tr>
<tr><td>VPA 17</td><td>15,500</td></tr>
<tr><td>VPA 18</td><td>15,500</td></tr>
<tr><td>VPA 19</td><td>15,500</td></tr>
<tr><td>VPA 20</td><td>15,500</td></tr>
<tr><td>VPA 21</td><td>15,500</td></tr>
<tr><td>VPA 22</td><td>15,500</td></tr>
<tr><td>VPA 23</td><td>15,500</td></tr>
<tr><td>VPA 24</td><td>15,500</td></tr>
<tr><td>VPA 25</td><td>15,500</td></tr>
<tr><td>VPA 26</td><td>15,500</td></tr>
<tr><td>VPA 27</td><td>15,500</td></tr>
<tr><td>VPA 28</td><td>15,500</td></tr>
<tr><td>VPA 29</td><td>15,500</td></tr>
<tr><td>VPA 30</td><td>15,500</td></tr>
<tr><td>VPA 31</td><td>15,500</td></tr>
<tr><td>VPA 32</td><td>15,500</td></tr>
<tr><td>VPA 33</td><td>15,500</td></tr>
<tr><td>VPA 34</td><td>8,143</td></tr>
</table></td></tr>
</table>

			The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs.
	Number of employments generated (Ne)	101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 34) The VPA01 does not claim benefits of SDG 8	The total 101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 34) has been generated till the end of monitoring period and the same has been confirmed through the employment records /33/. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs.
Findings	CL 03, CAR 05 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.		
Conclusion	The verification team confirm that the monitoring has been carried out in accordance with the validated VPA-DDs/3/. As per the registered monitoring plan, some of the parameters have biennial monitoring frequency, while some have annual monitoring frequency. However the CME has undertaken the annual monitoring for each of the parameter on conservative grounds even some of the parameters required biennial monitoring, which is found appropriate. The surveys for the previous monitoring period were undertaken from May-June 2023. The monitoring survey for this verification cycles were undertaken from April-May 2024 therefore the annual monitoring requirement is complied and found appropriate. The monitoring system is in compliance with the information flow for the parameters as mentioned in monitoring plan in validated VPA-DDs/3/. The monitored data for the parameters has been verified by checking the procedure for information flow and found to be complete and consistent.		

E.3.4.3. Implementation of sampling plan

Means of verification	A total of 519,643 ICS has been installed in all the VPAs (VPA 01 – VPA 34) till the end of monitoring period. During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DDs and registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. A representative sampling was undertaken as part of PoA level Sampling Plan. The objective of the sampling was to obtain an unbiased and reliable estimate of the proportion or mean value of the following parameters over the course of the

	monitoring period, and with 95/10 confidence/precision. As per the para 48 of the applied methodology/8/ "*When biennial inspection is chosen a 95 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampling parameter. On the other hand, when the project proponent chooses to inspect annually, a 90 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/10 precision are not achieved, the lower bound of the 90 per cent or 95 per cent confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/10 precision*" Further the applied methodology recommends applying the "*Standard for sampling and surveys for CDM project activities and programme of activities*"/24/ for determining the valid sample size. As per the para22 of the Sampling Standard, "*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation*". The target population is the total ICS population served under the grouped project (and covered under the monitoring report), and the sampling frame consists of aggregated data of end-users of the ICS as recorded in the project Databases. The sampling was conducted using simple random sampling technique over the sampling frame for each project instance. The expected parameter values (mean, standard deviation and proportion) have been determined based on project developer's knowledge and experience as per para 13(b) and 13(c) of the Sampling and surveys for CDM project activities and programmes of activities, Version 09.0/24/. Questionnaire survey form used by the surveyor has been provided. Since the relative margin of error obtained is less than 10% for the monitored parameter, relative precision of the data is statistically acceptable and deemed representative of the population.
Findings	CL 02 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	Verification team concludes the following: • The sample size considered for the parameter (monitored through sample basis) is found to be appropriate • The sampling plan implemented seems to be appropriate. • Through acceptance sampling, the verification team confirmed that all the data collected by CME through sample survey are correct. No error found.

E.3.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Not applicable as no monitoring equipments involved.
Findings	Not applicable
Conclusion	Not applicable

E.3.6. Assessment of data and calculation of emission reductions or net removals

E.3.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team has checked whether calculations of baseline GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. In detail the following has been verified: Transparency: It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.

Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet.

Correctness: It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the monitoring plan and the approved methodology.

Completeness: It has been checked whether all calculations are complete and without omissions.

The emission reductions are calculated as follows:
As per the validated VPA PDDs/PoA DD, emission reductions for both the scenarios have been calculated as per the following formulas given in the applicable meth, AMS-II.G. version 12.0;

$$ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$$

Where

i	=	Indices for the situation where more than one type of project device is introduced to replace the pre-project devices
J	=	Indices for the situation where there is more than one batch of project device
ER_y	=	Emission reductions during year y in t CO2e
$ER_{y,i,j}$	=	Emission reductions by project device of type i and batch j during year y in t CO2e
LE_y	=	Leakage emissions in the year y

where

$$ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\_fossil\ fuel}$$

where

$B_{y,savings,i,j}$	=	Quantity of woody biomass that is saved in tonnes per cook stove device of type i and batch j during year y
$f_{NRB,y}$	=	Fraction of woody biomass that can be established as non-renewable biomass using survey methods or government data or default country specific fraction of non-renewable woody biomass (fNRB) values available on the CDM website
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried')
$EF_{projected\_fossilfuel}$	=	Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 64.40 t CO2/TJ
$N_{y,i,j}$	=	Number of project devices of type i and batch j operating during year y
μ_y	=	Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 (fraction).

$$B_{y,savings,i,j} = B_{old,i,j} \times \left(1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}}\right)$$

Where

$B_{old,i,j}$ = Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j

$\eta_{new,i,j}$ = Efficiency of the device of each type i and batch j implemented as part of the project activity.

$\eta_{old,i,j}$ = Efficiency of pre–- project device, which is a three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney;

$$B_{old,i,j} = B_{old,HH} = B_{old,p} \times N_{p,HH}$$

Where

$B_{old,HH}$ = Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

$B_{old,p}$ = Annual quantity of woody biomass that would have been used per person in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

$N_{p,HH}$ = Average number of persons served per household prior to the project implementation

Using the above formula and ex-ante and ex-post parameters, the baseline emissions arrive as "1,078,038 tCO_2" (SDG13) for the current monitoring period (01/06/2023 to 31/05/2024).

During the last monitoring period (29/04/2022-31/05/2023), the emission reductions for the month of May 2023 were not claimed due to error in the formula in the ERs Excelsheet. The ERs Excelsheet of the last monitoring period has been checked and found that it does not include the calculations for the month of May 2023. Hence there was underestimation of emission reductions during the last monitoring period.

The CME has based on the guidance from Gold Standard, compensated the missed emission reductions of last monitoring period during this monitoring period. As per the GS Email dated 07/11/2024, "*Following team discussions, we would like to confirm that your approach for adding the missed emission reductions for the month of May 2023 is deemed acceptable, contingent upon the assessment by the VVB. Specifically, the VVB must evaluate and confirm the conservativeness of the calculations to ensure the appropriateness*". The PD has followed the same approach as confirmed by the GS through their above email.

The CME has additionally calculated the baseline emissions for the month of May 2023 during this current monitoring period. The Section E.1 of MR demonstrate the summary of baseline emissions for the monitoring period and May 2023 and calculated according to the applied methodologies. The baseline emissions for the month of May 2023 arrives as 84592 tCO_{2e}

Hence the baseline emissions combining the current monitoring period (01/06/2023 to 31/05/2024) and May 2023 is 1,162,630 tCO_{2e}

Further the total emission reductions are bifurcated into each of year vintages (2023, 2024), for which the calculations have been found correct as per the submitted ERs Excelsheet.

For the parameters other than SDG13, the following values have been calculated based on the validated VPA-DDs & MR.
Decrease in Mortality rate attributed to household and ambient air pollution (SDG03): 100%
Time spent collecting fuelwood from the forests and for cooking (SDG05): 4.38 hours
Number of project households predominantly using clean cooking devices such as Improved Cook Stoves: 0

	Number of employments generated (Ne): 0 Employments PP has submitted the calculation in the excel sheet. The baseline calculation in the excel sheet is checked whether the calculation is in accordance with the formula given in the validated VPA-DDs and the selected methodology.
Findings	CL 04 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The verification team confirms the following: • The calculations of baseline GHG emissions have been carried out in accordance with the equations and methods described in the registered monitoring plan and applied methodology. • The emission factor applied is an ex-ante value valid for the fixed crediting period. • Any assumptions used in emission or removal calculations have been justified. • Appropriate emission factor and other reference values have been correctly applied. It can be confirmed that the baseline calculation is overall correct. • The ER calculation sheet provided is clear, transparent and the calculations provided in the sheet are reproducible. • Hence, the baseline emission reported in the monitoring report for the monitoring period is verified to be correct.

E.3.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	The verification team has checked whether calculations of project GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. For the SDG13, the calculation algorithm in the methodology directly calculates emission reductions hence this is not applicable.
Findings	No findings raised during the verification process.
Conclusion	N/A

E.3.6.3. Calculation of leakage GHG emissions

Means of verification	The Net to Gross Leakage Adjustment Factor has been included in the emission reduction calculations applying adjustment factor 0.95 as per paragraph 39 of the applied methodology.
Findings	N/A
Conclusion	N/A

E.3.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	During the last monitoring period (29/04/2022-31/05/2023), the emission reductions for the month of May 2023 were not claimed due to error in the formula in the ERs Excelsheet. The ERs Excelsheet of the last monitoring period has been checked and found that it does not include the calculations for the month of May 2023. Hence there was underestimation of emission reductions during the last monitoring period. The CME has based on the guidance from Gold Standard, compensated the missed emission reductions of last monitoring period during this monitoring period. As per the GS Email dated 07/11/2024, "*Following team discussions, we would like to confirm that your approach for adding the missed emission reductions for the month of May 2023 is deemed acceptable, contingent upon the assessment by the VVB. Specifically, the VVB must evaluate and confirm the conservativeness of the calculations to ensure the appropriateness*". The PD has followed the same approach as confirmed by the GS through their above email. The CME has corrected the computation by considering the emission reductions for the month of May 2023 have now been included in this current monitoring period

	(01/06/2023 to 31/05/2024), which is found acceptable. Further it is observed that conservative calculations have been carried out for the month of May 2023. The PD specifically calculated the May 2023 credits using the weighted average efficiency of the current period, which is more conservative compared to the previous monitoring periods. Hence using the weighted average efficiency of the current period resulted into conservative emission reductions for the month of May 2023. The Section E.4 of MR demonstrate the summary of GHG emission reductions for the monitoring period (including ERs from May 2023) and calculated according to the applied methodologies as follows: ERy = BEy - PEy – LEy The emission reductions for the monitoring period (01/06/2023 to 31/05/2024) is as follows: Baseline emissions: 1,078,038 tCO_{2e} Project emissions: 0 tCO_{2e} Leakage: 0 tCO_{2e} Total Emission Reductions: 1,078,038 tCO_{2e} The emission reductions for the month of May 2023 is as follows: Baseline emissions: 84,592 tCO_{2e} Project emissions: 0 tCO_{2e} Leakage: 0 tCO_{2e} Total Emission Reductions: 84,592 tCO_{2e} The emission reductions combining the monitoring period (01/06/2023 to 31/05/2024) and May 2023 is as follows: Baseline emissions: 1,162,630 tCO_{2e} Project emissions: 0 tCO_{2e} Leakage: 0 tCO_{2e} Total Emission Reductions: 1,162,630 tCO_{2e} The emission reductions have been checked in the ERs Excelsheet and found that calculation of emission reductions combining the monitoring period (01/06/2023 to 31/05/2024) and May 2023 has been transparently calculated. The MR and ERs Excelsheet with the details on the combined emission reductions for the current monitoring period (01/06/2023 to 31/05/2024) and May 2023 is checked and found appropriate.
Findings	No findings raised during the verification process.
Conclusion	The verification team confirms the following: • The combined emission reductions for the current monitoring period (01/06/2023 to 31/05/2024) and May 2023 reported (i.e. 1,162,630 tCO_{2e}) is verified to be correct. • The summary table in the MR has been filled correctly and the values are in line with the related emissions reduction spread sheet.

SDG 13: The VPA wise break-up after apportioning the period for the monitoring period (01/06/2023 to 31/05/2024) with stove age in each calendar year and number of ICS is provided as below:

VPAs	**2023**	**2024**
VPA 1	20095	14234
VPA 2	20095	14234
VPA 3	20095	14234
VPA 4	20095	14234

VPA 5	20095	14234
VPA 6	20095	14234
VPA 7	20095	14234
VPA 8	20095	14234
VPA 9	20095	14234
VPA 10	20095	14234
VPA 11	20095	14234
VPA 12	20095	14234
VPA 13	20095	14234
VPA 14	20095	14234
VPA 15	20095	14234
VPA 16	20095	14234
VPA 17	20095	14234
VPA 18	20095	14234
VPA 19	20095	14234
VPA 20	20095	14234
VPA 21	20095	14234
VPA 22	20095	14234
VPA 23	20095	14234
VPA 24	20095	14234
VPA 25	20096	14234
VPA 26	20096	14234
VPA 27	19230	14234
VPA 28	16167	14234
VPA 29	13954	14234
VPA 30	11515	14234
VPA 31	9193	14234
VPA 32	6809	14234
VPA 33	3183	14234
VPA 34	9	5784
Total	**602532**	**475506**

SDG 13: The table below provides the breakdown of ERs for the month of May 2023 by each VPA.

VPA:	**2023**
VPA 1	2911
VPA 2	2911
VPA 3	2911
VPA 4	2911
VPA 5	2911
VPA 6	2911
VPA 7	2911
VPA 8	2911
VPA 9	2911
VPA 10	2911
VPA 11	2911
VPA 12	2911
VPA 13	2911
VPA 14	2911
VPA 15	2911

VPA 16	2911
VPA 17	2911
VPA 18	2911
VPA 19	2911
VPA 20	2911
VPA 21	2911
VPA 22	2911
VPA 23	2911
VPA 24	2911
VPA 25	9314
VPA 26	5212
VPA 27	202
VPA 28	0
VPA 29	0
VPA 30	0
VPA 31	0
VPA 32	0
VPA 33	0
VPA 34	0
Total	**84592**

SDG 13: The VPA wise break-up after apportioning the period (combined emission reductions for monitoring period: 01/06/2023 to 31/05/2024 + May 2023) with stove age in each calendar year and number of ICS is provided as below:

Vintage	2023	2024	Amount achieved during this monitoring period tCO2e
VPA 01	23006	14234	37240
VPA 02	23006	14234	37240
VPA 03	23006	14234	37240
VPA 04	23006	14234	37240
VPA 05	23006	14234	37240
VPA 06	23006	14234	37240
VPA 07	23006	14234	37240
VPA 08	23006	14234	37240
VPA 09	23006	14234	37240
VPA 10	23006	14234	37240
VPA 11	23006	14234	37240
VPA 12	23006	14234	37240
VPA 13	23006	14234	37240
VPA 14	23006	14234	37240
VPA 15	23006	14234	37240
VPA 16	23006	14234	37240
VPA 17	23006	14234	37240
VPA 18	23006	14234	37240
VPA 19	23006	14234	37240
VPA 20	23006	14234	37240
VPA 21	23006	14234	37240
VPA 22	23006	14234	37240
VPA 23	23006	14234	37240

VPA 24	23006	14234	37240
VPA 25	29410	14234	43644
VPA 26	25308	14234	39542
VPA 27	19432	14234	33666
VPA 28	16167	14234	30401
VPA 29	13954	14234	28188
VPA 30	11515	14234	25749
VPA 31	9193	14234	23427
VPA 32	6809	14234	21043
VPA 33	3183	14234	17417
VPA 34	9	5784	5793
ERy (total)	**687124**	**475506**	**1162630**

The total emission reductions are summarized as follows:

Title and UNFCCC reference number of the CPA	Baseline GHG emissions or baseline net GHG removals (t CO_2e)	Project GHG emissions or actual net GHG removals (t CO_2e)	Leakage GHG emissions (t CO_2e)	GHG emission reductions or net anthropogenic GHG removals (t CO_2e)[5]			
				Before 01/01/2013	From 01/01/2013 until 31/12/2020	From 01/01/2021	Total amount
VPA 01 – VPA 34	1162630	0	0	-	0	1162630	1162630
Total	1162630	0	0	-	0	1162630	1162630

The VPA wise emission reductions (as above) have been checked from the MR/ERs Excelsheet and found that conservative approach has been applied to estimate the emission reductions for each of the VPAs.

E.3.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included VPA

Means of verification	The verification team has checked whether the MR includes a comparison of actual values of the monitoring period with the estimations in the validated VPA-DDs. The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the validated VPA-DDs/3/. The actual achieved emission reduction is less than estimated emission reduction mentioned in the VPA-DDs.
Findings	CAR 06, CAR 07 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The estimated emission reduction as per validated VPA-DDs/3/ and the actual emission reduction achieved for the monitoring period are correctly reported in the MR. The actual achieved emission reduction for all VPAs are less than the VPA-DDs/3/ estimation. Hence no justification is required.

[5] The emission reductions for the month of May 2023 were not considered during the last monitoring period (29/04/2022-31/05/2023), hence the emission reductions for the month of May 2023 have now been included in this current monitoring period (01/06/2023 to 31/05/2024), which is found acceptable. The emission reduction calculations as per the ERs Excelsheet for last monitoring period (29/04/2022-31/05/2023) and for the current monitoring period (01/06/2023 to 31/05/2024) has been checked and found correct.

Title and Reference number of the VPA	Actual values achieved by the VPAs during this monitoring period	Value estimated in ex ante calculation in the included VPA-DD(s)
VPA 01 – VPA 34	1162630	1396936
Total	1162630	1396936

The VPA wise (also vintage year wise) comparison between "*actual values achieved by the VPAs during this monitoring period*" and "*value estimated in ex ante calculation in the included VPA-DD(s)*" are provided as below:

VPAs	2023	2024	Total ER (Ex-post, per VPA)
1	23006	14234	37240
2	23006	14234	37240
3	23006	14234	37240
4	23006	14234	37240
5	23006	14234	37240
6	23006	14234	37240
7	23006	14234	37240
8	23006	14234	37240
9	23006	14234	37240
10	23006	14234	37240
11	23006	14234	37240
12	23006	14234	37240
13	23006	14234	37240
14	23006	14234	37240
15	23006	14234	37240
16	23006	14234	37240
17	23006	14234	37240
18	23006	14234	37240
19	23006	14234	37240
20	23006	14234	37240
21	23006	14234	37240
22	23006	14234	37240
23	23006	14234	37240
24	23006	14234	37240
25	29410	14234	43644
26	25308	14234	39542
27	19432	14234	33666
28	16167	14234	30401
29	13954	14234	28188
30	11515	14234	25749
31	9193	14234	23427
32	6809	14234	21043
33	3183	14234	17417
34	9	5784	5793
Total	**687124**	**475506**	**1162630**

VPAs	2023	2024	ERy (Ex-ante, total per VPA)
1	27607	17081	44688
2	27607	17081	44688
3	27607	17081	44688
4	27607	17081	44688
5	27607	17081	44688
6	27607	17081	44688
7	27607	17081	44688
8	27607	17081	44688
9	27607	17081	44688
10	27607	17081	44688
11	27607	17081	44688
12	27607	17081	44688
13	27607	17081	44688
14	27607	17081	44688
15	27607	17081	44688
16	27607	17081	44688
17	27607	17081	44688
18	27607	17081	44688
19	27607	17081	44688
20	27607	17081	44688
21	27607	17081	44688
22	27607	17081	44688
23	27607	17081	44688
24	27607	17081	44688
25	35291	17081	52372
26	30369	17081	47450
27	23318	17081	40398
28	19400	17081	36481
29	16745	17081	33825
30	13818	17081	30898
31	11032	17081	28113
32	8171	17081	25252
33	3820	17081	20900
34	22	13212	13234
Total	**824551**	**576878**	**1401429**

E.3.6.6. Remarks on difference from estimated value in included VPA

Means of verification	The verification team has determined the VERs achieved during this monitoring period with the estimated values and reason for increase, if any.
Findings	No findings raised during the verification process.
Conclusion	The actual achieved emission reductions are less than the VPA-DDs estimation. Hence no justification is required.

E.3.7. Assessment of reported other SDG benefits

Relevant SDG	SDG-3: Good Health and Well Being
Parameter	Mortality rate attributed to household and ambient air pollution
Source	Monitoring survey
Monitored Value	Decrease in Mortality rate attributed to household and ambient air pollution: 53%
Means of verification	The Mortality rate attributed to household and ambient air pollution is monitored through sample surveys. The sample survey sheets are verified and found that the data reported in MR is correct. It is also cross-verified through interview with end user during the site visit.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline Estimate	Project Estimate	Net Benefit
Decrease in Mortality rate	0	53%	53%

Relevant SDG	SDG-5: Gender Equality
Parameter description	Time spent collecting fuelwood from the forests and for cooking
Source	Monitoring survey
Monitored Value	2.33 hours/week/HH decrease in the time spent collecting firewood. The same value is applicable to all VPAs.
Means of verification	The stoves are distributed to the households with the help of women self-help groups. Women are educated on the benefits of improved stoves and they are further involved in the knowledge transfer and promotion of the improved cookstoves to the households. This is possible only when they have spare time for attending the trainings and participating in the discussions and then finally disseminating knowledge to the end-users. Hence this project equally promotes women to take part in the activities apart from only collecting wood and cooking food and hence it leads to promotion of gender equality. The time spent collecting fuelwood from the forests and for cooking is monitored through sample surveys. The sample survey sheets are verified and found that the data reported in MR is correct. It is also cross-verified through interview with end user during the site visit.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline value	Project Value	Net Benefit
Time spent collecting fuelwood	4.38 hours/week/HH	2.05 hours/week/HH	2.33 hours/week/HH

<table>
<tr><td>Relevant SDG</td><td>SDG-7: Affordable and Clean energy</td></tr>
<tr><td>Parameter description</td><td>Number of project households predominantly using clean cooking devices such as Improved Cook Stoves</td></tr>
<tr><td>Source</td><td>Monitoring survey</td></tr>
<tr><td>Monitored Value</td><td>15,500/VPA (for the VPA 01 to VPA 33)
8,143 (for VPA 34 till the end of monitoring period)
Total distributed stoves till the end of monitoring period: 519,643 ICS
Total number of ICS found operational during the monitoring period: 515,859 ICS</td></tr>
<tr><td>Means of verification</td><td>The information on the number of clean cooking devices operational is determined by the ICS users' survey through monitoring of the user households drawn as random sample. The details on the monitoring survey was checked with the help of interviews conducted with the households during site visit and found correct.</td></tr>
<tr><td>Findings</td><td>No findings raised during the verification process.</td></tr>
<tr><td>Conclusion</td><td>The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.
<table>
<tr><th>Parameter</th><th>Baseline value</th><th>Project Value</th><th>Net Benefit</th></tr>
<tr><td>Number of project households predominantly using clean cooking devices such as Improved Cook Stoves</td><td>0</td><td>515,859 households</td><td>515,859 households</td></tr>
</table>
</td></tr>
</table>

SDG 7: The VPA wise break-up of ICS operating in each calendar year is provided as below:

VPA Number	2023	2024
VPA 01	15387	15387
VPA 02	15387	15387
VPA 03	15387	15387
VPA 04	15387	15387
VPA 05	15387	15387
VPA 06	15387	15387
VPA 07	15387	15387
VPA 08	15387	15387
VPA 09	15387	15387
VPA 10	15387	15387
VPA 11	15387	15387
VPA 12	15387	15387
VPA 13	15387	15387
VPA 14	15387	15387
VPA 15	15387	15387
VPA 16	15387	15387
VPA 17	15387	15387
VPA 18	15387	15387
VPA 19	15387	15387
VPA 20	15387	15387
VPA 21	15387	15387
VPA 22	15387	15387
VPA 23	15387	15387
VPA 24	15387	15387
VPA 25	10300	15387
VPA 26	0	15387
VPA 27	0	15387

VPA 28	0	15387
VPA 29	0	15387
VPA 30	0	15387
VPA 31	0	15387
VPA 32	0	15387
VPA 33	0	15387
VPA 34	0	8084
Total		515859

Relevant SDG	SDG-8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Parameter description	Number of employments generated (Ne)
Source	Employment records
Monitored Value	101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 34) VPA 01 does not claim benefits of SDG 8
Means of verification	The information on the number of employment has been checked through the Employment records and through the interview of project owner and site visit.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline value	Project Value	Net Benefit
Number of employments generated (Ne)	0	101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 34)	101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 34)

SDG 8: The VPA wise break-up in each calendar year is provided as below:

VPA Number	**2023**	**2024**
VPA 01	0	0
VPA 02	101	101
VPA 03	101	101
VPA 04	101	101
VPA 05	101	101
VPA 06	101	101
VPA 07	101	101
VPA 08	101	101
VPA 09	101	101
VPA 10	101	101
VPA 11	101	101
VPA 12	101	101
VPA 13	101	101
VPA 14	101	101
VPA 15	101	101
VPA 16	115	115
VPA 17	115	115
VPA 18	115	115

VPA 19	115	115
VPA 20	115	115
VPA 21	115	115
VPA 22	115	115
VPA 23	115	115
VPA 24	115	115
VPA 25	115	115
VPA 26	0	115
VPA 27	0	115
VPA 28	0	115
VPA 29	0	115
VPA 30	0	115
VPA 31	0	115
VPA 32	0	115
VPA 33	0	115
VPA 34	0	115

The VPA wise break-up (as above) has been checked from the MR/ERs Excelsheet and found correct based on the site visit/interviews conducted for the PoA.

E.4. Stakeholder Inputs & Legal Dispute

Means of verification	The project developer has a defined continuous grievance input mechanism in place which is made aware to all stakeholders specially to project ICS users in their ICS user's manual and VERs right transfer agreement. As per PP's record there was no grievance recorded during the monitoring period. VVB interviewed ICS users and could confirm there was no grievance recorded by any stakeholders. Hence, PP's justification is accepted.
Findings	CL 05 was raised during the verification process, which was subsequently closed.
Conclusion	The verification team confirms the following: • No grievances received during the current monitoring period • 4KES confirms that monitoring of all the sustainable development monitoring parameters during this monitoring period is in line with the SD monitoring plan and are consistent with on-site visit. • No legal consent or dispute arise during the monitoring period.

SECTION F. Internal quality control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by 4KES are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable Gold Standard & CDM requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The independent technical reviewer(s) may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submitting final report to Client/Gold Standard. The final approval decision is taken by the Head of the DOE/Director.

The final decision is authorized by the Director, 4KES, once the report is finalized by the Head of the DOE/DOE Manager.

SECTION G. Verification opinion

The verification team confirms that the evidence is of sufficient quantity, appropriate quality and reliable. The reported values, notation, units and sources in the monitoring report for all the monitoring parameters have been cross checked with the emission reduction sheet and monitoring report. During the course of verification and onsite visit, the data submitted by CME was cross verified with the values mentioned in the emission reduction sheet and monitoring report. The procedure for data monitoring, recording, transfer and compilation was also verified and found in compliance with the monitoring plan as mentioned in the registered PoA-DD/4/ & VPA-DDs/3/ and is in line with VVS for PoA, Version 03/22/ paragraph 345 & GS4GG guidelines/23/.

Evidences (Documents/interview/site visit) referred for verification of individual monitoring parameter and fixed parameters are defined in section E.3.4 above. It is confirmed by the assessment team that the reported emission reductions have been conservatively calculated. A list of referred documents for verification is also included in Appendix 3 of this report.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 1162630 tCO_2e emission reductions during period 01/06/2023 to 31/05/2024[6] (including both days).

SECTION H. Certification statement

4K Earth Science Private Limited has been contracted by “Greenway Grameen Infra Pvt Ltd” to undertake independent verification and certification for the greenhouse gas (GHG) emission reductions reported and the contribution to sustainable development indicators from the GS4GG PoA “Dissemination of Improved Cookstoves in India by Greenway” and GS Ref # GS 10818 for the monitoring period 01/06/2023 to 31/05/2024 (including both dates) in the GS Monitoring Report Version 01 (first version) dated 07/05/2024/1/.

The verification is based on the registered GS4GG PoA-DD & validated VPA-DDs and the GS4GG monitoring report for this project. Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakech accord, as well as those defined by the Gold Standard Board.

“Greenway Grameen Infra Pvt Ltd” is the coordinating/Managing Entity and it is responsible for inclusion of 34 VPAs (VPA01 – VPA34) under this PoA. The verification of the PoA includes 34 VPAs (VPA01 – VPA34) for the monitoring period: 01/06/2023 to 31/05/2024 (including both dates). The management of the "Greenway Grameen Infra Pvt Ltd" is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions & monitoring of SDG parameters on the basis set out within the project final GS Monitoring Report Version 4.0, dated 11/11/2024/1/. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of "Greenway Grameen Infra Pvt Ltd”. The development and maintenance of records and reporting procedures are in accordance with the GS Monitoring Report Version 4.0, dated 11/11/2024/1/.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the monitoring period 01/06/2023 to 31/05/2024 (including both dates) based on the reported emission reductions in the final Monitoring Report Version 4.0, dated 11/11/2024/1/ for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, 4K Earth Science Pvt. Ltd planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

As per the VVS for PoA, Version 03, paragraph 358, 4KES confirms and concludes the following;

The verified and certified emission reduction during the monitoring period 01/06/2023 to 31/05/2024 (including both dates) is stated below:

[6] These emission reductions are combined emission reductions for the current monitoring period (01/06/2023 to 31/05/2024) and the month of May 2023. The detailed information is provided in the above sections of the Report.

Vintage	Duration	Verified emission reductions (tCO_2e)[7]
2023	01/06/2023 – 31/12/2023	687124
2024	01/01/2024 – 31/05/2024	475506
Total	**01/06/2023 – 31/05/2024**	**1162630**

[7] These emission reductions are combined emission reductions for the current monitoring period (01/06/2023 to 31/05/2024) and the month of May 2023. The detailed information is provided in the above sections of the Report.

Appendix 1. Abbreviations

Abbreviations	Full texts
4KES	4K Earth Science Pvt. Ltd
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CH4	Methane
CL	Clarification Request
CO2e	Carbon dioxide equivalent
DOE	Designated Operating Entity
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
FT	Field Test
GHGs	Greenhouse Gas(es)
GS	Gold Standard
GWP	Global Warming Potential
HH	Household
ISO	International Organization of Standardization
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
KPT	Kitchen Performance Test
LE	Leakage Emissions
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goal
MP	Monitoring Plan
MR	Monitoring Report
NCV	Net Calorific Value
NGO	Non Governmental Organisation
NRB	Non Renewable Biomass
PE	Project Emissions
PoA-DD	Program of Activity Design Document
PS	Project Standard
PCP	Project Cycle Procedure
SD	Sustainable Development
SDG	Sustainable Development Goal
SHG	Self Help Group
QA/QC	Quality Assurance/Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
VVB	Validation and Verification Body
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Narendra Kumar. R**					
Qualification Procedure	*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:							
	CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	
Appointed	Yes	Yes	Yes	Yes	Yes	Yes	
Appointed Date	15-07-2023						
Authorized to work as Technical Expert for:							
Authorized Technical Area	**Sectoral Scope**		**TA Code**	**Technical Area within the scope**			
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation			
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables			
	Energy demand		3.1	Energy demand			
	Waste handling and disposal		13.1	Solid waste and wastewater			
	Waste handling and disposal		13.2	Manure			
Authorized to work as Local Expert for:							
Country/Countries	India						
Compliance check by: Swati S Acharya							

Certificate of Competence							
Name	☐ Mr. ☒ Ms.	**Swati S Acharya**					
Qualification Procedure	*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:							
	CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	
Appointed	Yes	No	Yes	Yes	No	No	
Appointed Date	15/07/2023						
Authorized to work as Technical Expert for:							
Authorized Technical Area	**Sectoral Scope**		**TA Code**	**Technical Area within the scope**			
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables			
Authorized to work as Local Expert for:							
Country/Countries	India						
Compliance check by: Anand S. R.							

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Ma Paa Puratchikkanal**					
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.*					
Appointed to work as:							
		CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**
Appointed		Yes	Yes	Yes	Yes	Yes	No
Appointed Date		27-04-2021					
Authorized to work as Technical Expert for:							
Authorized Technical Area		**Sectoral Scope**		**TA Code**	**Technical Area within the scope**		
		Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
		Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
		Energy demand		3.1	Energy demand		
		Construction		6.1	Construction		
		Waste handling and disposal		13.1	Solid waste and wastewater		
		Waste handling and disposal		13.2	Manure		
		Agriculture		15.1	Agriculture		
Authorized to work as Local Expert for:							
Country/Countries		India, Sri Lanka					
Compliance check by: Anand S. R.							

Appendix 3. Documents reviewed or referenced

No.	Title	References to the document
1.	MR (initial) version 1.0 MR (final) version 4.0	07/05/2024 11/11/2024
2.	ERs Excelsheet (corresponding to initial MR version 1.0) ERs Excelsheet (corresponding to final MR version 4.0)	07/05/2024 11/11/2024
3.	Validated VPA-DDs: VPA 0001 (version 8.0) VPA 0002 (version 3.0) VPA 0003 (version 3.0) VPA 0004 (version 3.0) VPA 0005 (version 3.0) VPA 0006 (version 3.0) VPA 0007 (version 3.0) VPA 0008 (version 3.0) VPA 0009 (version 3.0) VPA 0010 (version 3.0) VPA 0011 (version 3.0) VPA 0012 (version 3.0) VPA 0013 (version 3.0) VPA 0014 (version 3.0) VPA 0015 (version 3.0) VPA 0016 (version 2.0) VPA 0017 (version 2.0) VPA 0018 (version 2.0) VPA 0019 (version 2.0) VPA 0020 (version 2.0) VPA 0021 (version 2.0) VPA 0022 (version 2.0) VPA 0023 (version 2.0) VPA 0024 (version 2.0) VPA 0025 (version 2.0) VPA 0026 (version 2.0) VPA 0027 (version 1.0) VPA 0028 (version 1.0) VPA 0029 (version 1.0) VPA 0030 (version 1.0) VPA 0031 (version 1.0) VPA 0032 (version 1.0) VPA 0033 (version 1.0) VPA 0034 (version 1.0)	 12/01/2022 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023 23/11/2023
4.	Registered PoA-DD (version 5.1)	08/01/2022
5.	Validation report of the registered PoA (version 02)	28/07/2021
6.	VPA-DD of the registered VPA 01 (version 8.0)	12/01/2022
7.	Validation report of the registered VPA 01 (version 05)	14/01/2022
8.	Methodology (AMS II.G: Energy efficiency measures in thermal applications of non-renewable biomass, version 12)	14/12/2020
9.	Project database	
10.	Local Stakeholder Consultation report	
11.	Certification of Incorporation for Greenway Grameen Infra Pvt. Ltd.	02/12/2010
12.	Declaration Form for no double counting	18/06/2024
13.	Declaration on insolvency or legal/criminal notices placed against it or any of its Directors	18/06/2024
14.	Technical specifications (including the stove lifetime) of the Greenway Jumbo Stoves	
15.	Installation database	

16.	Agreement between Beneficiary and Greenway Grameen Infra Pvt. Ltd. (Greenway) for the households installed under 34 VPAs (VPA 01-VPA34) covered during the monitoring surveys.	
17.	Invoice from Greenway Grameen Infra Pvt. Ltd. to the beneficiary end-users for the households installed under 34 VPAs (VPA 01-VPA34)	
18.	Monitoring survey records for the households installed under 34 VPAs (VPA 01-VPA34)	
19.	WBT Tests conducted for the 20 ICS	
20.	Declaration of non-use of Official Development Assistance declaration	18/06/2024
21.	Memorandum of understanding between Greenway Grameen Infra Pvt. Ltd. and Sri Kshetra Dharmasthala Rural Development Project BC Trust (R.)	01/04/2020
22.	CDM Project Standard for PoA CDM Validation and Verification Standard for PoA	Version 03 Version 03
23.	GHG Emissions Reduction & Sequestration Product Requirements, Version 2.0 Community Services Activity Requirements, v1.2 Programme of Activity Requirements, Version 1.2 Stakeholder Consultation and Engagement Requirements, Version 1.2 Stakeholder Consultation and Engagement Guidelines, Version 1.2 Principles & Requirements, Version 1.2 Safeguarding Principles & Requirements, v1.2 https://globalgoals.goldstandard.org/all-documents/	
24.	Guideline for sampling and surveys for CDM project activities and programmes of activities, Version 04.0 Sampling and surveys for CDM project activities and programmes of activities, Version 09.0	
25.	TOOL 30: Calculation of the fraction of non-renewable biomass, Version 03.0 https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v3.0.pdf/history_view	
26.	Audit Samples	
27.	Monitoring Report Form https://www.goldstandard.org/project-developers/standard-documents	Version 1.1
28.	Training Records	
29.	Gold Standard Monitoring report template & MR filling instruction	Version 1.1
30.	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	Web Link
31.	Kyoto Protocol (1997)	Web Link
32.	State of forest report 2019	
33.	Employment records	
34.	WBT Protocol listed by Clean Cooking Alliance https://cleancooking.org/research-evidence-learning/standards-testing/protocols/	
35.	Indian Oil website https://iocl.com/indane-cooking-gas-overview	

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

Table 1. Remaining FAR from previous validation/verification

FAR ID	01	**Section no.**	Section B.1.1	**Date:** 20/06/2024
Description of FAR				
The project developer has concluded that "No FARs were there during the preliminary review by SustainCERT for the VPA27-34 inclusions". However there are FARs as per the Design Certification Review report of the VPA27-34 inclusions. Hence the relevant details be provided in the MR. Check. FAR 1. PD shall include relevant questions in future project monitoring surveys that ensure the risk of double counting, especially regarding the use of ICSs from other registered projects/programs, can be assessed.				

The VVB is asked to thoroughly verify the double-counting aspect.

FAR 2. PD shall include relevant questions in future project monitoring surveys that ensure the risk of double counting, especially regarding the use of ICSs from other registered projects/programs, can be assessed. The VVB is asked to thoroughly verify the double-counting aspect.

FAR 3. LPG use shall be accounted for within the emission reduction calculation and not as a separate project emission source. The PD is asked to include relevant questions in the project monitoring surveys to estimate the exact use of LPG stoves in the same way that (other) baseline stove usage is assessed. Monitoring plan for relevant parameters shall be revised to account for the LPG usage during the monitoring period. The VVB shall review this aspect thoroughly and consider it for the sample selection.

FAR 4. For the VPAs directly included by the CME following Fast track inclusion pathway, the VVB shall conduct the site visit within two years of a VPA's start date. If not, the CME could only claim the realized VERs in the period of two years prior to the 1st verification onsite visiting date for the specific VPAs.

FAR 5. The VVB that performs the first verification for these VPAs to be included in the PoA without VVB compliance check, shall confirm that they comply with the requirements defined for the inclusion of VPAs in the registered PoA.

FAR 6. The PoA was design certified in Feb 2022 and adopted GS4GG PoA requirements, V1.2. The CME shall follow design change procedure to upgrade to GS4GG PoA requirements, V2.1 and shall define the eligibility criteria for inclusion of real case and its regular VPAs in the PoA in case the CME wants to define real case and regular case VPAs and follow the New PoA hierarchy defined, and corresponding rules and requirements established.

Project participant response	**Date:** 23/062024

Response to FAR#1: To mitigate the risk of double counting the PD has undertaken following measures. These ensures that the distributed ICS has not been included in any other GHG programs. These are listed below:
1. The PD has included the relevant question to avoid double counting, which has already been used in the current monitoring survey (2023-2024). This can be reviewed in the ER calculation worksheet under the "Survey Response" sheet.

2. The PD maintains a database of the ICS distributed to the beneficiaries ensuring that no other stoves are involved in the program.

3. The PD has provided a signed declaration claiming no double counting.

4. The PD ensures no double counting by assigning unique stove IDs, which can be tracked and are continuously monitored through various programmes (training, awareness and maintenance) conducted by the PD.

Response to FAR#2: To mitigate the risk of double counting the PD has undertaken following measures. These ensures that the distributed ICS has not been included in any other GHG programs. These are listed below:
1. The PD has included the relevant question to avoid double counting, which has already been used in the current monitoring survey (2023-2024). This can be reviewed in the ER calculation worksheet under the "Survey Response" sheet.

2. The PD maintains a database of the ICS distributed to the beneficiaries ensuring that no other stoves are involved in the program.

3. The PD has provided a signed declaration claiming no double counting.

4. The PD ensures no double counting by assigning unique stove IDs, which can be tracked and are continuously monitored through various programmes (training, awareness and maintenance) conducted by the PD.

Response to FAR#3: LPG usage has been accounted within emission reduction calculation and it has not been accounted as a separate emission source. And the same can be viewed in the ER sheet. The PD has included required questions in the project monitoring survey (2023-2024) to estimate the exact usage of LPG

stoves in the same way that (other) baseline stove usage are being assessed. Below are the following included questions:

1. Do you also use LPG Cylinders?
2. If yes, how many times do you refill the cylinder in a year?
3. How many times do you cook on LPG stove in a week?
    a. Once a week
    b. Twice a week
    c. Thrice a week
    d. Four times a week
    e. Five times a week
    f. Daily
4. If daily, then how many times a day?

This can be verified from the ER sheet under "Survey Responses" worksheet. Additionally, the same has been added in the MR under section D.2 Data and Parameters Monitored.

Response to FAR#4: The start date of the VPAs from VPA#27 to VPA#34 are as follows:

VPAs	Start Date
27	21/05/2023
28	26/06/2023
29	25/07/2023
30	18/08/2023
31	14/09/2023
32	07/10/2023
33	10/11/2023
34	27/12/2023

The start dates for VPAs #27 to #34 have been recorded in the above table, showing that their start year is 2023. The VVB conducted the required site visits during the current monitoring period (2023-2024) in June 2024, thereby fulfilling the requirement of conducting site visits within two years of each VPA's start date.

Response to FAR#5: The project proponent is complying with the requirements defined for the inclusion of VPAs in the registered PoA. Please refer to the section A.1.1 in the approved VPA-DD, version 1.

Response to FAR#6: The Program of Activities (PoA) adheres to the requirements outlined in GS4GG PoA requirements, version 1.2. Any updates or changes to these requirements will be reflected following the renewal of the PoA.

Documentation provided by project participant

DOE assessment	**Date:** 02/07/2024

1. Assessment on FAR 1: Based on the desk review and site visit, the VVB has confirmed that PD has undertaken sufficient measures to avoid the double counting. Some of the measures are as follows:
a. The PD has included the relevant question to avoid double counting, which has already been used in the current monitoring survey (2023-2024). This has been checked in the ER calculation worksheet under the "Survey Response" sheet.
b. The PD has maintained a proper database of the ICS distributed to the beneficiaries that ensures that no other stoves are involved in the program.
c. The PD has provided signed declaration on no double counting.
d. The PD has ensured no double counting by assigning unique stove IDs, which can be tracked and are continuously monitored through various programmes (training, awareness and maintenance) conducted by the PD. Hence the FAR is closed.

2. Assessment on FAR 2: Based on the desk review and site visit, the VVB has confirmed that PD has undertaken sufficient measures to avoid the double counting. Some of the measures are as follows:
a. The PD has included the relevant question to avoid double counting, which has already been used in the current monitoring survey (2023-2024). This has been checked in the ER calculation worksheet under the "Survey Response" sheet.
b. The PD has maintained a proper database of the ICS distributed to the beneficiaries that ensures that no other stoves are involved in the program.

c. The PD has provided signed declaration on no double counting.
d. The PD has ensured no double counting by assigning unique stove IDs, which can be tracked and are continuously monitored through various programmes (training, awareness and maintenance) conducted by the PD. Hence the FAR is closed.

3. Assessment on FAR 3: The LPG usage have now been accounted within the emission reduction calculations and not as a separate emissions source. The PD has also included the relevant questions in the project monitoring surveys to estimate the exact use of LPG stoves in the same way that baseline stove usage is assessed. The monitoring plan for relevant parameters have been revised to account for the LPG usage during the monitoring period, which is found appropriate. Hence the FAR is closed.

4. Assessment on FAR 4: The start date of the VPAs from VPA#27 to VPA#34 has been checked and found that their starting year is year 2023 and the site visits have already been conducted in year 2023-24 (June 2024), which is within 2 years of the year 2023. Hence the requirements of the site visit has been met by the VPAs, hence found correct. Hence the FAR is closed.

5. Assessment on FAR 5: All the requirements of the inclusion of VPAs in the registered PoA has been checked from the included VPA-DD and found meeting during the monitoring period.

The Eligibility criteria is discussed as follows:

Eligibility Criterion	Description/Required condition	Justification on Compliance
VPA Location and Project Boundary	The geographical boundary within which the technologies are installed will be within the Project Boundary outlined in Section A.3	Each VPA has been uniquely defined by current administrative maps to define the project boundary. All the VPAs are implemented within the Indian state of Karnataka, which was confirmed during the site visit.
Avoiding Double Counting of Emission Reductions	Each VPA will ensure that double counting of emission reductions is avoided, through the unique identification of each ICS with an identification number.	Each cookstove installed in this VPA is provided a unique serial number, ensuring that they are uniquely identifiable to this project. These serial numbers are available in the sales database which has been checked. Further the unique serial numbers and avoidance of double counting was confirmed during the site visit.
Avoiding Double Counting of Programme Activities	TEMPLATE- V2.2 VPA Design Document Climate Security and Sustainable Development 3 Avoiding Double Counting of Programme Activities Each VPA will show that it is exclusive to the PoA and not registered as another project activity or VPA under another PoA.	A declaration by the CME is provided that VPAs are neither registered as a project activity with GS or any other standard or as a VPA of another PoA. Gold Standard and CDM registries were checked and confirmed that the project is not a part of any other CDM or GS PoA/Project.
Target Group	Each VPA involves the distribution and installation of efficient cook stoves to households and/or communities currently cooking with non-renewable biomass on a traditional stove. Distribution Mechanism: Via Local distribution agencies/VPA Implementer	The VPA implementer has confirmed that the project ICS devices are distributed to only households and/or communities who are traditionally using firewood. This was also confirmed during the site visit.
Technology	The technology involves energy efficient cookstoves with a	The evidence for thermal efficiency specifications or test

	thermal efficiency of more than 20%. The technologies will deliver continuous energy output of less than 150kW per unit.	results for the VPA have been submitted. It has also been confirmed that technologies will deliver continuous energy output of less than 150kW per unit.
Start date	The start date of the VPA shall not be prior to the PoA period start date and the VPA crediting period shall start from the VPA start date or two years prior to the date of Design Certification – whichever is later.	It is confirmed that the start date of the VPAs are not prior to the PoA period start date and the VPA crediting period start from the VPA start date or two years prior to the date of Design Certification – whichever is later. The agreements with the end-users and the Invoices have been checked and confirmed on the start date.
Methodology	Each VPA is in compliance with CDM methodology AMS.II.G. Version 12.	The applicability of the methodology is justified in Section B.2 of VPA-DD and applies to these VPAs. The VPAs meet the applicability criteria of the applied methodology.
Additionality	Each VPA demonstrate additionality according to the criteria outlined in the PoA-DD	The VPA meets the requirements of Positive List mentioned within the Community Services Activity Requirements V1.2. The proposed project falls under the automatic eligibility list of projects for proving additionality. It is mentioned in the Annex B-Positive list that project activities composed of isolated units where the users of the technology / measure are households, where each unit results in <= 600 MWh of energy savings per year will be deemed additional. As per the submitted calculations, each cookstove within the VPA will deliver energy savings which is much less than the threshold of 600 MWh and hence found appropriate.
Non- Diversion of ODA	There is no diversion of ODA for any of the proposed VPAs	A declaration of non-use of ODA has been completed and submitted and found appropriate.
Sampling	At the time of verification, random sampling shall be conducted on the basis of the age group of all the cookstoves. VPAs under the program will adhere to all requirements as mentioned in the latest standard of Standard: “Sampling and surveys for CDM project activities and programme of activities” at the time of inclusion.	The sampling plan is described in the VPA-DD. The CME has made sure during the sampling, that all cookstoves from all the VPAs are included, and the sampling is conducted in accordance with the latest version of “Sampling and surveys for CDM project activities and programme of activities”
Scale of the Activity	The PoA falls under type II energy efficiency improvement projects. The maximum limit for	The specifications of the product model and the calculations for the estimation of total thermal energy

	small-scale project is to achieve energy saving of 180 GWh thermal per year. Each VPA is designed to comply to small scale requirements by limiting the maximum number of cookstoves per VPA. Each VPA will estimate the aggregate annual energy savings based on the thermal efficiency gains achieved by each of the technology/product-model planned under the VPA. The maximum number of cookstoves will be fixed for each VPA based on the above calculation to limit the total energy savings up to 180 GWh per year.	savings and the maximum number of cookstoves eligible under the VPA is submitted. As per the calculations the maximum no. of cookstoves that have been added in a VPA is 15,610 to be on the safer side CME decide to included only 15,500 per VPA, hence found appropriate.
SDG outcome assessment	VPA shall demonstrate a clear, direct contribution to sustainable development, defined as making demonstrable, positive impacts on at least three SDGs, one of which must be SDG 13 (defined herein as Emissions Reductions or Removals and/or Adaptation to climate change)	The VPAs has demonstrated the positive impacts on SDG 3, SDG 5, SDG 7, SDG 8 and SDG 13 and found appropriate.
Carbon Transfer	It is clearly communicated that Greenway Grameen Infra Pvt Ltd is the entity that is claiming ownership rights of and selling the emission reductions resulting from the project activity	The stove recipients were clearly explained about the transfer of carbon credits and the invoice of sale for each unit of ICS. This invoice is explained orally in the vernacular language of the user and physically signed by the user via a mobile app before the installation of the cookstove. The same was confirmed during the site visit and found appropriate,
Safeguarding Principles Assessment	Each VPA will describe the implementation plan for ensuring safety of operational team/staff and the households.	All the VPAs has the implementation plan for ensuring safety of operational team/staff and the households, which was also confirmed during the site visit and found appropriate.
Retroactive Crediting Period	VPAs retroactive crediting period submit the required documents for Gold Standard Preliminary Review (time of first submission) within one year from the VPA start date	The requirements of the retroactive crediting period has been met and the same has been confirmed through the interviews and site visit.
Grievance Mechanism	All VPAs shall have the methodology of addressing grievances of stakeholders as indicated in section F.3 of PoA DD.	The VPAs have the methodology of addressing grievances of stakeholders and the same has been confirmed during the site visit.

Hence the FAR is closed.

6. Assessment on FAR 6: The PD has confirmed that updated or changes to the latest requirements of the

PoA shall be followed at the time of renewal of the crediting period of the PoA. Hence the FAR remains open. FAR: The PoA was design certified in Feb 2022 and adopted GS4GG PoA requirements, V1.2. The CME shall follow the latest GS4GG PoA requirements, as applicable, at the time of renewal of the crediting period of PoA.

Table 2. CL from this verification

CL ID	01	**Section no.**	Section C	**Date:** 20/06/2024
Description of CL				
As there are 34 VPAs in the current monitoring period, hence it shall be clarified as how the maintenance activities are ensured for the total population of households where the ICS have been distributed.				
Project participant response				**Date:** 23/06/2024
The PP undertakes multiple activities to ensure beneficiary problems pertaining to the stoves are addressed. Some of these are: A. Periodic trainings: In section C, under Periodic Trainings section of the monitoring report (MR), it highlights the regular awareness generation and community connect events conducted across the state by the Greenway ground team. In these events ground team collects the queries and complaints from the beneficiaries and addresses accordingly. Beneficiaries are also provided with a manual containing the usage guideline and customer care number for any issues they may encounter. B. Guarantee: The stoves come with a two-year guarantee, ensuring reliability and customer satisfaction. C. Spare parts: Additionally, spare parts are readily available at warehouses in Hassan and Hubli, Karnataka, allowing for prompt replacement of any damaged components due to unforeseen conditions.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
During the site visit, it was confirmed that periodic trainings are in place on the regular awareness generation and regular maintenance activities are provided to the households as well. The maintenance activities for the total population of households (where ICS distributed) have been found adequate and the justification provided above is found appropriate. Hence the comment is closed.				

CL ID	02	**Section no.**	Section D.4	**Date:** 20/06/2024
Description of CL				
1. The PD shall clarify as how the WBT samples have been found appropriate considering the Sampling Guidelines and hence Sampling requirements. The relevant justification may be provided in this regard. 2. As 34 VPAs are involved in the current monitoring period and ICS have been distributed throughout the state of Karnataka. Hence it shall be clarified as how the chosen samples are representative of the entire population of 34 VPAs in the current monitoring period. Clarify				
Project participant response				**Date:** 23/06/2024

There are 30 districts in the state of Karnataka and the stove distribution has occurred across all these districts. Multiple districts of the state have been served through the individual VPAs, cumulatively covering the entire state. The following measures have been undertaken to ensure that the sampling for monitoring and WBT are representative:

WBT: The entire beneficiary population (519,643) across all the VPAs were divided into four stove age categories (0-1 for year 2023-2024, 1-2 for year 2022 to 2023, 2-3 for year 2021 to 2022 and 3-4 for year 2020 to 2021). Random sampling was then individually performed on each stove age category to obtain the necessary samples. According to the, *Guideline: Sampling and surveys for CDM project activities and programmes of activities v4.0* it was ensured that the sample size was adequate by following a systematic approach. The below table shows the sample number by stove age as calculated based on the guideline. To ensure conservativeness in sampling, the PP took more samples than what the calculator suggested to enhance the reliability of of the data. These steps were taken to ensure that the sampling process was conducted appropriately for the efficiency calculation.

Stove age	Number of samples suggested by the calculator	Number of samples taken by the project proponent
0-1	2	5
1-2	3	6
2-3	2	5
3-4	2	4

Monitoring: The entire population across VPAs resulted in a total of 519,643 distributions across the state. Random sampling was then individually performed on each stove vintage to obtain the necessary samples for monitoring. Following the, *Guideline: Sampling and surveys for CDM project activities and programmes of activities v4.0*, we ensured that the sample size was adequate through a systematic approach. After the samples suggested by the calculator, PP selected 10 random samples from VPAs 1 to 34 to ensure all VPAs are represented in the final monitoring. The below table shows the number of samples suggested by the calculator using the guideline and the number of samples taken by the PP. Additionally, PP kept a buffer of 20% in the final samples to account for any non-responses. It is to be noted that the total number of samples monitored were 272 while the calculator suggested a total 32 samples to be monitored. Since the distribution is in the state of Karnataka, the PP also ensured that samples selected for monitoring are covering the entire districts in the state of Karnataka. Hence, the PP has been conservative and ensured representation across VPAs in the entire project.

Vintages	Number of samples suggested by the calculator	Number of samples taken by the PP
Vintage 1 (2023-2024)	8	73
Vintage 2 (2022-2023)	10	81
Vintage 3 (2021-2022)	7	58
Vintage 4 (2020-2021)	7	60

Documentation provided by project participant

DOE assessment	Date: 02/07/2024
To determine the efficiency of the stoves, Water Boiling Test (WBT)/19/ was carried out based on the statistically determined representative samples using the WBT Protocol listed by Clean Cooking Alliance. PP has conducted water boiling test of 20 ICS and confirmed through the interviews that WBT Protocol listed by Clean Cooking Alliance has been following for the WBT tests/34/. The same approach for the testing was following during the 1st and 2nd monitoring period of this PoA, which has already been accepted by SustainCERT during the previous verifications. The surveys for the previous monitoring period were undertaken in May-June 2023. The current monitoring survey (for 3rd monitoring period) was undertaken in April-May 2024, which was within 1 year of the last monitoring survey conducted during the 2nd monitoring period, hence the annual monitoring frequency has been met by the VPAs. PP used the stove efficiency determined from sample stoves having vintage 1 (2023-2024), vintage 2 (2022-2023), vintage 3 (2021-2022) and vintage 4 (2020-2021). The household samples based on each of the vintages were selected. The sample size of 5 samples (vintage-1), 6 samples (vintage-2), 5 samples (vintage-3) and 4 samples (vintage-4) were finally considered (which is more than minimum of samples obtained) based on the calculations recommended by "*Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0*", which is also inline with the applied methodology/8/, hence found appropriate. Please refer to the paragraph 22 of the "Standard: Sampling and surveys for CDM project activities and programmes of activities, version 09" as per which "*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation. In the latter case, the populations of all CPAs in the group are combined together, the sample size is determined and a single survey is undertaken to collect data*". Hence a single sample size has been determined applying 95/10 confidence/precision for the sample size calculation, which is inline with the Sampling Standard. All the 34 VPAs have been considered in 4 age-groups and batchwise sample size has been calculated for all the 4 age groups. As the parameter is a numeric mean and minimum of 4 sample sizes arrived based on the sampling calculations, hence Student's t-distribution has been used to finally arrive at the sample size of (2, 3, 2, 2 samples). Based on the calculations presented in the "Sampling & Precision" spreadsheet, the sample size of (2, 3, 2, 2 samples) were found inline with the Sampling Standard/Guidelines. However more number of sample surveys were carried out: 5 samples (vintage-1), 6 samples (vintage-2), 5 samples (vintage-3), 4 samples (vintage-4) during the monitoring period, which is more than the minimum sample size required for each of the vintages. The average monitored efficiency of 37.68%, 36.32%, 35.22% and 34.10% were determined for the vintage-1, vintage-2, vintage-3 and vintage-4 respectively. The efficiency test sheets and the age calculation of sample stoves are checked and found correct. Hence the weighted average efficiency of the Stoves as 35.94% based on the above three vintages have been found correct. The results of the water boiling test shows that the accuracy of the result is within 5% limit. Verification team checked all the water boiling test results and found correct.	

CL ID	03	Section no.	Section D.2	Date: 20/06/2024
Description of CL				
Please refer to the SDG impact of SDG8 in the MR. For all the VPAs, the same number of employment is presented, which is not clear. It shall be clarified whether each of the VPAs have separate employments generation as per the details presented in the MR. Clarify.				
Project participant response				**Date:** 23/06/2024

A single project Team is executing the entire cookstove dissemination program in Karnataka across VPAs (and across districts). From the inception, the distribution in VPAs was planned pan-Karnataka by design, ensuring the same team is involved in the implementation of the individual VPAs (for distribution, monitoring, and awareness generation). To ensure conservativeness in reporting, the PP has reported the cumulative employment numbers, as reporting different numbers on the individual VPAs would lead to overestimation. The employment generation numbers per VPA thus presented are reflective of the actual employment the VPAs have produced.
Documentation provided by project participant
DOE assessment **Date:** 02/07/2024
The justification provided by the project developer has been found appropriate based on the site visit. Hence the comment is closed.

CL ID	04	**Section no.**	Section E.2	**Date:** 20/06/2024
Description of CL				
As per the result of the monitoring surveys, LPG use in the households are observed. It shall be clarified as how the LPG usage has been taken into account in the emission reduction calculations. The relevant details be provided in the MR.				
Project participant response				**Date:** 23/06/2024
The project intended to distribute improved cookstoves to those who depended on the baseline stoves for their cooking needs. At the time of the distribution of ICS to the end-users, the PoA field team/local team provided instructions/trainings to end-users on the correct method of using the ICS. Further the households are/were encouraged on only using the ICS and to discontinue the baseline stoves /other stoves in parallel. The usage of LPG stoves is mostly observed both in the baseline scenario as well as the project scenario that sometimes in the case of emergencies, households also use the LPG stove in parallel to the ICS. Hence the LPG usage gets into account in the same way as the baseline/other stove usage gets assessed. The same was confirmed through periodic monitoring of sampled households. The exact use of LPG has been estimated (refer to FAR response 3) in the same way as the baseline usage has been assessed. And thus, LPG usage has been taken into account in the emission reduction calculation. The same can be evidenced in the ER sheet of the current monitoring period (2023-2024).				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
The LPG usage has been taken into account in the emission reduction calculations in the ERs Exccelsheet, which is found appropriate and hence accepted. Hence the comment is closed.				

CL ID	05	**Section no.**	Section G.1	**Date:** 20/06/2024
Description of CL				
The details are provided as “Not Applicable” in Section G.1, however as per the MR filling guidelines, “*Include all disputes, inputs and comments received via the approved CIGM and show how these were responded to and/or mitigated. Please clarify any items that have not been fully addressed and that require follow up action*”. Hence additional details be provided as per the MR filling guidelines.				
Project participant response				**Date:** 23/06/2024
CME has established a procedure for grievance redressal and for seeking feedback/grievances from stakeholders contacting the end users on a regular basis to ensure the proper functioning of cookstoves, takes feedback to address grievances, and adds more users by spreading awareness. No grievances or complaints were received during the monitoring period.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
The additional details related to the stakeholders inputs/grievances are now provided in the Section G.1 of the MR, which is found appropriate. Hence the comment is closed.				

Table 3. CAR from this verification

CAR ID	01	**Section no.**	PoA & VPA KPI section	**Date:** 20/06/2024
Description of CAR				
1. The VPA number and GS ID of some of the VPAs in the PoA/VPA KPI section (MR) does not match with the VPA number and GS ID as available on the GS website. Check. 2. The version of the VPA-DDs in KPI section does not match with the version of VPA-DDs as available on the GS website. Check. 3. The "completion date of monitoring report" has not been provided in the KPI section of MR. Check. 4. The "date of design certification" has not been provided for all the VPAs in the KPI section of MR. Check.				
Project participant response				**Date:** 23/06/2024
1. The VPA number and GS ID has been updated and corrected as per the VPA number and GS ID provided on the GS website. 2. The version number has been corrected. 3. The completion date of the monitoring report has been updated. 4. The date of design certification has been updated for VPA027 to VPA034.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
1. The VPA number & GS ID of the VPAs are not corrected and matches with the details as available on the GS website. Hence the comment is closed 2. The version of the VPA-DD are now corrected and inline with the details as available on the GS website. Hence the comment is closed. 3. The completion date has now been provided in the MR. Hence the comment is closed. 4. The "date of design certification" is now provided in the KPI section of MR. Hence the comment is closed.				

CAR ID	02	**Section no.**	Table 1, Table 2	**Date:** 20/06/2024
Description of CAR				
1. MR (Table 1): The SDG impact value for the SDG-5 in Table 1 does not match with the ERs Excelsheet. Check. Further the SDG impact value for SDG-8 does not match with the ERs Excelsheet. Check. 2. MR (Table 2): The start date and end date of monitoring period in Table 2 does not match with the dates as per the KPI section of MR. Check.				
Project participant response				**Date:** 23/06/2024
1. The table 1 and SDG impact value has been been corrected and updated as per ER file provided. 2. The start and end date has been corrected and updated.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
1. The SDG impact value for the SDG-5 is now consistent between MR and ERs Excelsheet. Hence the comment is closed. 2. The start date and end date of the monitoring period is now consistent in the MR. Hence the comment is closed.				

CAR ID	03	**Section no.**	Section A.4	**Date:** 20/06/2024
Description of CAR				
The crediting period dates for the VPA27, VPA28, VPA29, VPA30, VPA31, VPA32, VPA33, VPA34 does not match with the dates as per the registered VPA-DDs. Check.				
Project participant response				**Date:** 23/06/2024

The crediting period date change from VPA 27 to 34 has already been proposed to GS and latest document has been uploaded on SustainCert website. Accordingly, the dates have been updated and corrected.
Documentation provided by project participant
DOE assessment **Date:** 02/07/2024
The crediting period dates have been updated and hence the comment is closed.

CAR ID	04	**Section no.**	Section D.1	**Date:** 20/06/2024
Description of CAR				
For the parameter "fNRB,y", the source of data is provided as "State of forest report 2011", however the source of data is "State of forest report 2019" as per the registered VPAs. Check on the observed differences.				
Project participant response				**Date:** 23/06/2024
Project Proponent opted to use the FNRB of 93.66% calculated from the older data (from Forest report of 2011) as it was conservative. In the Design Certification of VPA#02-15 the fNRB value was critically reviewed and accepted by the VVB as well as the review team of Sustain CERT. The PP had demonstrated then that the newer values of the fNRB was much higher (96.02%) with data from recent vintages (2019-21). This was making the fNRB higher and the PP wanted to opt for a conservative fNRB instead. This is the reason why the source of data cited is from a 2011 report. (Please refer to the lates design review response titled "GS4GG Design Review_GS12364 to 12372_final_29052024" for the VPAs 27 to 35).				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
The source of data as "State of forest report 2011" is found appropriate as it is a conservative approach, hence the comment is closed.				

CAR ID	05	**Section no.**	Section D.2	**Date:** 20/06/2024
Description of CAR				
1. For the parameter "Access to affordable and improved energy services", the monitoring frequency is provided as "biennially" in Section D.2, however the monitoring frequency is "Annually" as per the registered VPA-DDs. Check. 2. For the parameter "Number of employments generated (Ne)", the value provided in Section D.2 does not match with the value as per the Table 1 of the MR. Check. 3. Please refer to the "name of household representative" column in the "survey responses" spreadsheet, where two household names are provided in local language, while in case of one household "no" name is provided. Check. Similarly the details are found in local language at few places in some of the other columns of the Survey responses spreadsheet. Check.				
Project participant response				**Date:** 23/06/2024
1. This has been corrected and updated as per the registered VPA-DDs. 2. The value for the parameter "Number of employments generated (Ne)" has been corrected and updated and is now matching with the values provided in Table 1. 3. The names of the households has been corrected and updated.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024

1. The monitoring frequency is now corrected in MR, which is inline with the registered VPA-DDs, hence the comment is closed. 2. The value of the parameter “Number of employments generated (Ne)” is now consistent in the MR and hence the comment is closed. 3. The households name is now correctly provided in the “survey responses” spreadsheet, which is found appropriate. Hence the comment is closed.

CAR ID	06	**Section no.**	Section D.3, D.4	**Date:** 20/06/2024
Description of CAR				
1. The values for some of the parameters in Section D.3 does not match with the values as per the ERs Excelsheet. Check. 2. The version of Sampling Guidelines is not consistent within the MR. Check. 3. The end date of the monitoring period in Section D.4 is not consistent with the end date as per the other sections of the MR. Check.				
Project participant response				**Date:** 23/06/2024
Documentation provided by project participant				
1. The values has been corrected and updated and are now matching with the provided ER sheet. 2. The version number has been updated. 3. The end date has been corrected and updated.				
DOE assessment				**Date:** 02/07/2024
1. The values of the parameters in Section D.3 matches with the ERs Excelsheet. Hence the comment is closed. 2. The version of sampling guidelines is now updated and hence the comment is closed. 3. The end of the monitoring period is now consistent in the MR and hence the comment is closed.				

CAR ID	07	**Section no.**	Section E.1, E.2, E.4, E.5	**Date:** 20/06/2024
Description of CAR				
1. The value of “Ny,i,a” in Section E.1 is not consistent with the ERs Excelsheet. Check. 2. The project value for the SDG8 does not match with the details as available in the Table 1 of MR. Check. 3. The SDG impact value for SDG5, SDG8 in Section E.4, E.5 does not match with the Table 1 of MR. Check.				
Project participant response				**Date:** 23/06/2024
1. The value is 519,643, this is the total number of distribution and as “Ny,i,a” is the ex-ante value, so the value for this is considered to be as total number of distribution i.e. 519,643. 2. The values for SDG 8 has been corrected and updated as per table 1. 3. The values has been corrected and updated.				
Documentation provided by project participant				
DOE assessment				**Date:** 02/07/2024
1. The justification provided is found appropriate, hence the comment is closed. 2. The SDG impact value corresponding to the SDG8 is now consistent in the MR, hence the comment is closed. 3. The SDG impact value for the SDG5, SDG8 in now consistent in the MR, hence the comment is closed.				

Table 4. FAR from this verification

A FAR raised during this verification.

FAR ID	01	**Section No.**		**Date:** 26/06/2024
Description of FAR				

The PoA was design certified in Feb 2022 and adopted GS4GG PoA requirements, V1.2. The CME shall follow the latest GS4GG PoA requirements, as applicable, at the time of renewal of the crediting period of PoA.	
Project participant response	**Date:** DD/MM/YYYY
Documentation provided by project participant	
DOE assessment	**Date:** DD/MM/YYYY

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