



GLOBAL COOKSTOVE PROGRAM (EKI PHASE 01)



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¹ <https://registry.verra.org/app/projectDetail/VCS/2939>

VCS Standard Version	4.6 ²
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Summary:

LGAI Technological Center, S.A. (Applus+ Certification) was contracted by M/s EKI Energy Services Limited to conduct verification of the project “Global Cookstove Program (EKI Phase 01)”, VCS Project ID 2939 against VCS standard version 4.6/5/

The objective of the verification work is to comply with the requirements of Verified Carbon Standard requirements and ensure that the project activity has been implemented and operated as per the registered joint PD&MR^{1/}, and that all physical features (technology, project equipment, and monitoring equipment of the project are in place. The monitoring methodology is used in accordance with the VCS methodology VMR006 “Methodology for Installation of High Efficiency Firewood

² Project activity was validated using VCS standard version 4.6.

Cookstoves”, Version 1.1/4/ which is valid from 22-July-2021. A site visit was performed to confirm the information provided by PP^{9/}.

The project involves distribution of fuel-efficient Improved cook stoves (ICS) to replace the baseline traditional cook stoves in households. The ICS to be deployed under this project is energy efficient which substantially reduces fuel consumption and emissions for conducting cooking and water heating tasks in homes. By substituting traditional cooking stoves with ICS, family members-particularly women- were exposed to less indoor air pollution, saving money on health-related expenses. The boundary of the grouped project is in India and the project proponent perceived one improved cookstove (ICS) as one instance for the current grouped project activity with a total number of 34,000 ICS instances distributed across the boundary.

The first crediting period’s expected annual average emission reductions over a seven-year period are 190,438 tCO₂e /year. A total of 1,333,063 tCO₂e GHG emissions is estimated to be reduced during the course of the seven-year crediting period. A total of 179,189 tCO₂e GHG emissions were reduced over the third monitoring period from 01-February-2023 to 31-December-2023 (inclusive of both the dates).

LGA Technological Center, S.A. (Applus+ Certification) now has enough proof to confirm that the stated criteria have been met after reviewing the Monitoring report/2/, Emission reduction sheets/3/ and additional documents pertaining to monitoring methodology, as well as after conducting background research, conducting follow-up interviews and speaking with stakeholders.

Reviewing the monitoring report/2/ for the monitoring results and confirming that the monitoring methodology/4/ was applied in accordance with the monitoring plan and monitoring parameters are the main goals of the verification. After reviewing the ER sheet/3/, it was confirmed that the reductions due to the anthropogenic emissions by sources are sufficient, conclusive, and presented in a clear and understandable way. In order to establish that the project has been implemented in line with registered project design/1/ and as specified in the registered monitoring plan, registered Joint VCS PD-MR/1/, MR for the current (3rd periodic) monitoring period/2/ and corresponding ER sheet/2/, and the project's compliance with relevant VCS/5/, UNFCCC/6/, and host party criteria were specifically checked.

Verification of project implementation and operation in accordance with the registered VCS Joint PD & MR/1/, implemented monitoring plan as reported in the monitoring report/1/, and applied baseline & monitoring methodology, VMR0006, version 1.1/4/ were all included in the scope of the verification. It was also verified that the actual monitoring systems and procedures are adhered to, as per the monitoring systems and procedures outlined in the monitoring plan. Identification of any substantial inaccuracies in the stated GHG emission reduction estimations and articulating a conclusion with a fair degree of assurance was part of the assessment. It is confirmed by the assessment team that the stated GHG emission data is appropriately supported by evidence.

This verification has been carried out using a risk-based methodology. 04 Corrective Action Requests (CARs) and 05 Clarification Requests (CLs) were raised during verification and successfully closed. No FAR was raised during this verification period. There was no FAR from the previous verification.

The project has been successfully verified, and further certified for emission reductions under VCS as it meets the criteria outlined by the MR template version 4.3/5/, the VCS Standard version 4.6/5/, and the applied methodology VMR0006, Version 1.1/4/.

Our view refers to the projects' claimed GHG emissions, GHG emission reductions as a result, and to the project's legitimate baseline, monitoring, and supporting documents. Based on the information viewed and assessed, we confirm that the project activity "Global Cookstove Program (EKI Phase 01)" achieved emission reductions by 179,189 tCO₂e from 01-February-2023 to 31-December-2023, including both the days.

The conclusion of this report shows that the project, as it was described in the project documentation, is in line with all criteria applicable for the verification. This verification is based on the information made available to LGAI Technological Center S.A. (Applus+ Certification) and the engagement conditions are detailed in this report. VVB's team didn't identify any restriction or uncertainties related to verification of the project activity.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. (Applus+ Certification) has been contracted by M/s EKI Energy Services Ltd., (project proponent), to undertake the verification of the energy efficiency of improved cookstove project titled “Global Cookstove Program (EKI Phase 01)” VCS 2939. The assessment team have reviewed the GHG data collected for the monitoring period from 01-February-2023 to 31-December-2023 (including both the days) covered in this verification. The objective of the verification is to have an independent third-party assessment of the monitoring report/2/ and supporting documentation to ensure compliance with the rules, regulations and guidelines by CDM and VCS requirements. In particular;

- The project's baseline is assessed against “VMR0006 Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1”/4/
- VCS Validation and Verification Manual, version v 03.2 /6(a)/
- VCS standard v4.6 /5(b)/
- VCS Program guide v4.4 /7(a)/

LGAI Technological Center, S.A. (Applus+ Certification) as the Validation/Verification Body (VVB) for the project activity is accredited as a DOE by UNFCCC and also meets the competence requirements as set out in the normative reference ISO 14065:2020.

Verification is a requirement for all VCS projects and is seen as necessary to through the provision of objective evidence, provide assurance to stakeholders of the quality of the project and that the requirements for a specific intended generation of verified carbon units (VCUs).

1.2 Scope and Criteria

The scope of the verification was the independent and objective review and ex-post determination of the monitored reductions in GHG emissions from “Global Cookstove Program (EKI Phase 01)” VCS Project ID 2939. The verification of this project was based on the monitoring report and supporting documents submitted by the project proponent to the verification team. The documents were reviewed against the following guidance and protocols:

- VCS Program Guide (v4.4, dated 29-August-2023)/5(a)/
- VCS Standard (v4.6, dated 21-March-2024)/5(b)/
- VCS Program Definitions (v4.4, dated 29-August-2023)/5(c)/
- VCS Registration & Issuance Process (v4.4, dated 4-October-2023)/5(d)/

- VCS approved methodology VMR0006 (version 1.1, dated 22/07/2021)/4/

The verification is not meant to provide any consulting towards the client. However, stated request for clarifications and/or corrective actions may provide input for improvement of the project design. The verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. There are no material errors, overestimation of ER, Emission or misstatement.

The only purpose of the verification is its usage during the issuance processes as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client. The verification team verified the complete monitoring data for all the parameters of the monitoring plan and confirms that the reported emission reductions are free from any type of material errors.

Through an exhaustive process of documentary review, interviews with the project owners, site visits and sampling and surveying (where applicable), assessment on GHG Emission Reductions calculations against applicable methodology and any other regulatory document, and reporting of objective evidences, the VVB is able to reach a reasonable level of assurance on the conduction of the Verification process.

The achieved level of assurance for this verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.6 clause 4.1.10 (1).

VVB applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities as per VCS Standard version 4.6 clause 4.1.10 (4).

Additionally, according to the VCS Validation and Verification Manual version 3.2/01/, while all material errors, omissions and misrepresentations must be addressed for a project to receive a positive validation or verification opinion, when non-material errors have been found in the project documents, the VVB requested the project proponent to correct them and ensured that such errors have been addressed where practicable.

The verification conclusion is assured a reasonable level of assurance.

1.4 Summary Description of the Project

The main purpose of the project is to distribute fuel-efficient improved cook stoves (ICS) in India. The ICS disseminated through this project has replaced the old low efficient traditional 3-stones fire stoves.

Through this project, the distribution and installation of ICS have undertaken for households and communities/non-household. Under this project, high thermal efficient cook stoves were distributed. The ICS burns wood more efficiently thereby improving thermal transfer to pots, hence saving fuel and greenhouse gases. Not only does this halt the rapidly progressing deforestation but also reduces health hazards from indoor smoke pollution and women and children have to spend less time collecting firewood.

As the target populations were unable to afford these stoves (ICS), project promoters had distributed ICS free of cost. Prior notice was given to end users that utilizing ICS would result in generating carbon finance, which would subsequently be utilized to offset the cost of ICS and cover project implementation expenses.

Till date, the project activity instances distributed under this grouped project are in [Udalguri](#) district of Assam state of India. Same has been verified through KML file submitted by PP. thus accepted.

The ICS has replaced the old low efficient traditional 3-stones fire stoves. The baseline scenario is the continued use of non-renewable biomass (fire wood) by the target population to meet similar thermal energy needs as provided by project cookstoves in absence of project activity.

During registration of project activity, PP has implemented 3,858 ICS through 2021 and 30,142 ICS from 01-January-2022 to 31-May-2022. PP distributed a total of 34,000 ICS throughout the monitoring period. The current project's boundary is in India, and there are 34,000 project activity instances in the state of Assam. . The project through conservation of non-renewable biomass results in greenhouse gas emission reduction. The emission reductions achieved in this monitoring period are 179,189 tCO_{2e}.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The procedures used by LGAI Technological Center S.A. (Applus+ Certification) for verification were carried out in accordance with the requirements stated in the VCS standard requirements/5/, the CDM M&P, the most recent version of the CDM Validation & verification standard (VVS)/6/, and pertinent decisions of the COP/MOP and the CDM EB while using standard auditing techniques.

WVB Sampling:

The assessment team applied acceptance sampling in accordance with the paragraph 27-33 of the “Standard: Sampling and surveys for CDM project activities and programme of activities, version 09”/06/. The assessment team carried out the random sampling from the PP’s sample records and checked (using its professional judgment) the acceptability of the data for each record in the PP’s sample records. The assessment team has determined acceptance sample size based on the “Table. Sample size and acceptance number based on AQL, UQL, and producer and consumer risks” of standard “Sampling and surveys for CDM project activities and programme of activities” version 09.0.

During the onsite audit verification, a random sampling approach has been used by the verification team to verify the reported values for the monitored parameters which are determined through sample survey by PP. For the determination of acceptance sample size, in line with paragraph 39 of the Standard: Sampling and surveys for CDM project activities and programme of activities, version 09”/6/, the verification team has selected the following using its professional judgment:

- Acceptable quality level (AQL) – 1.0%
- Unacceptable Quality Level (UQL) – 20%
- Producer risk - 10%
- Consumer risk - 20%

The table from the standard is provided below and the AQL, UQL, producer and consumer risk is highlighted for the present project activity decided by the VVB.

Producer Risk			5%	5%		5%		5%	
Consumer Risk			5%	10%		15%		20%	
AQL	UQL	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)
0.5%	10%	46	1	38	1	33	1	29	1
0.5%	15%	30	1	25	1	22	1	10	0
0.5%	20%	22	1	18	1	9	0	8	0
1.0%	10%	61	2	52	2	33	1	29	1
1.0%	15%	30	1	25	1	22	1	19	1
1.0%	20%	22	1	18	1	16	1	14	1
Producer Risk			10%	10%		10%		10%	
Consumer Risk			5%	10%		15%		20%	
AQL	UQL	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)
0.5%	10%	46	1	38	1	19	0	16	0

0.5%	15%	19	0	15	0	12	0	10	0
0.5%	20%	14	0	11	0	9	0	8	0
1.0%	10%	46	1	38	1	33	1	29	1
1.0%	15%	30	1	25	1	22	1	10	0
1.0%	20%	22	1	18	1	9	0	8	0

The verification team has determined acceptance sample size for all the sample survey parameters based on the “Table. Sample size and acceptance number based on AQL, UQL, and producer and consumer risks” of standard “Sampling and surveys for CDM project activity and programme of activities” version 09.0/6/. From the above factors, the verification team determined the minimum sample size (n) as 08 and acceptance number (c) as 0.

The verification team has chosen an AQL (Acceptable Quality Level) of 1.0% and a UQL (Unacceptable Quality Level) of 20%, ensuring a producer risk of 10% and a consumer risk of 10%, based on the VVB's professional judgment in accordance with the guidelines outlined in para 30 of the Sampling and Surveys for CDM Project Activities and Programmes of Activities v09.0. It must be noted that higher acceptable quality level (AQL) i.e., 1% was chosen over 0.5% since this is the second monitoring period of the project activity. The level of failures or non responsiveness based on the earlier monitoring period was zero on the identified samples by the PP. The relative margin of error obtained is also less than 10%. Based on this prior information available at the time of second monitoring period, the AQL was chosen at 1%. These priors provided the necessary inputs for the professional judgement.

The verification team has conservatively selected 08 + 07 (extra) samples household visited on-ground rather than only 08 households in accordance with above. The extra surprise households were visited during onsite visit in accordance with auditor's professional judgement. The samples for the site audit to verify the reported values for the monitored parameters are selected randomly through Random sampling method from the samples of the monitoring survey conducted by the project proponent/8/. The assessment team interviewed the households during on site audit conducted at the locations from both the activity instances states to check the acceptability of the data for each record in the PP's sample records.

Using acceptance sampling approach, assessment team checked the PP's sample results (reported in the Monitoring surveys) along with the following evidences:

1. Onsite audit inspection/interviews
2. ICS Database
3. Database of all project participating households

Following the requirement of the paragraph 28 of the Standard “Sampling and surveys for CDM project activities and programmes of activities” version 09.0, the acceptability of data in the random sample chosen from the PP’s sample records was determined. Based on the number of records where there was agreement, it was determined whether the PP’s sample records meet the requirements. The acceptability of the data was based on the assessment team professional judgement in line with the para 28 of the Sampling Standard.

The Verification process has been conducted following the regulatory documents and based on the ISO 14064-3:2019 and ISO 14065:2020 using standard auditing techniques as required by the VCS Standard version 4.6.

The Verification process has been conducted through an onsite inspection (see below), thus, no need for a risk analysis for remote inspections has been determined for this Verification (cf. VCS Standard v4.6. Para 4.1.13).

No ICT means have been used for the conduction of this Verification process other than those for the provision of documents and transferring information and undertake normal communications with the PP(s). Those ICT means supporting the process in this sense, have been used to an extent sufficient to cover the background necessities of the Verification process and have demonstrated enough effectiveness to conduct it in accordance with the relevant applicable regulatory requirements.

This process has included: the review of data and information presented to verify their completeness; the review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements and the QA/QC procedures; an evaluation of data management; and an evaluation of the QA/QC system in place in the context of its influence on the generation and reporting of emission reductions.

No virtual sites have been included in the Verification process according to the definition in the IAF MD4:2023 document. Instead, the documentation has been provided upon request from the VVB by other means (such as physical documents, mail, transfer applications, etc.)

All the data records for the parameters were in agreement with PP’s sample records and no discrepant records was found from the PP’s records. Since no discrepant records were found, the PP’s set of records have been accepted based on the acceptance sampling. This is in line with the paragraph 32 of Standard “Sampling and surveys for CDM project activities and programmes of activities” version 09.0/6/ and found acceptable.

The intended implementation and operation of the project activity, as well as the actions done to report emission reductions, must be evaluated and decided to conform with the criteria and pertinent instructions issued by the VCS Board. The following three steps make up the verification procedure;

- A documentation review of the MR/2/ and ER sheet/3/.
- Conduct meeting with and subsequent interviews with project stakeholders.
- The completion of outstanding issues and the issuance of the final report and opinion.

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the Applus+ Certification's procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

Applus+ Certification has completed a strategic review and risk assessment of the project's activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project's emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of validating the estimated data; and
- Compilation of the information in the VCS MR.

Based on the above, the VVB prepared a Verification Plan and applied an evidence-gathering plan designed to collect sufficient and appropriate evidence upon which to base the conclusion and to consider the inherent risk for the Verification. The evidence-gathering plan is based on analytical procedures and tests and considers the thresholds for materiality as per the regulatory documents applied for this Verification (5% as per the applied VCS Standard version 4.6).

The applied evidence-gathering plan is used by the VVB to determine the conformity of the statements made by the client against the principles and requirements of the applied regulatory documents during this verification.

The evidence-gathering plan designed by the VVB takes into consideration, as a minimum:

- The selection and management of the data and information;
- The processes for collecting, processing, consolidating, aggregating and reporting the data and information;
- Systems and processes in place to ensure the validity and accuracy of the data and information;
- The design and maintenance of the system to control the data and information;
- Systems, processes and personnel that support system in place, including activities for ensuring data quality;
- The plans for instrument maintenance and calibration where appropriate;

- The results of previous validation activities and verifications, where available and appropriate

Once the project's initial documentation is received by the assessment team, the members of the assessment team carried out:

Applus+ Certification has verified the implementation of the monitoring plan and the data presented in the Project Description^{/04/} for the monitoring period applicable to this verification process.

The process of verification involved the following relevant milestones:

- The signature of the contract for verification between the PP and the VVB;
- A kick-off meeting/communication to require the documentary material to perform an initial desk review;
- An initial desk review of the documentary evidences prepared by the Project Proponent;
- The issuance of findings coming from this initial desk review (if any);
- The conduction of an onsite visit, including interviews with project proponent and project stakeholders (see Sections 2.3 and 2.4 below);
- The issuance of findings from the onsite inspection and communication of such deviations (if any) to the Project Proponent;
- The assessment of their resolution and closure, when appropriate;
- Once all the findings have been closed, the elaboration of this Verification Report, in which such findings (if any) are described;
- The conduction of an independent Technical Review;
- Upon conclusion of the Technical Review, the VVB may perform a final quality check before the issuance of the Final Verification Report (FVeR) and signature of the corresponding Verification Deed.

The process of this verification assessment has implied sampling approach as mentioned above.

Appointment of the assessment team: -

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification).

The composition of audit team is approved by the LGAI Technological Center S.A. (Applus+ Certification) Central Site during its Contract Review stage, ensuring that the required skills are covered by the team.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) /Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Other supporting roles such as Country Expert (CE) or Financial Expert (FE)
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training/TeiT for Technical Expert in Trainee).

The Sectoral Scope / Technical Area required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

Name	Role	SS/ TA Coverage	Financial aspect	Host country experience	Attendance to on-site visit
Dr. Atul Takarkhede	LA, TE	YES (3.1)	N/A	YES	YES
Mr. Ravi Jangid	Obs	No	N/A	YES	Yes
Mr. Sarthak Jain	Obs	No	N/A	YES	Yes
Dr. N. Premjit Singh	TR	YES (3.1)	N/A	N/A	N/A

The complete list of CVs is included as Appendix 4 of this report.

Document Review: -

The Monitoring report submitted by the Client was reviewed against the VCS approved joint PD & MR, approved methodology and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in appendix 2

Onsite visit:

An on-site audit on 31-January-2024 and 01-February-2024 is conducted by LGAI Technological Center S.A. (Applus+ Certification) assessment team who performed interviews and on-site inspection with project's stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report in the below sections

Resolution of Clarification and Correction Action Request: -

Resolution of Clarification and Correction Action Request: -

The objective of this phase of the verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for LGAI Technological Center S.A. (Applus+ Certification) positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by LGAI Technological Center S.A. (Applus+ Certification) were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the appendix 4

The final version of VCS MR submitted by project proponent serves as the basis for the final assessment presented. Additional changes to the project during the verification is not considered to be significant with respect to the main VCS objectives. The two VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality Control: -

As final step of a validation the final documentation including the verification report and the protocol have to undergo an internal quality control by the technical review committee. Once approved by the Technical Review Team, each report has to be finally approved by the authorized personnel of the VVB (either the Technical Manager or other authority in case the Technical Manager is part of the Validation and/or Verification-Certification (VVC) Team for the project).

After confirmation of the PP, the verification opinion and relevant documents are submitted to the VCS Registry.

2.2 Document Review

As described in detail in appendix 2 of this document, the verification is largely carried out as a document review of the registered VCS joint PD&MR/1/ and related evidences. Using a LGAI Technological Center S.A. (Applus+ Certification) quality procedure, the verification team conducted the evaluation by cross-referencing data from MR with data from additional sources, if available, with the team's sectoral or local knowledge, and, if necessary, independent background checks. The details of the document observed during the Verification process are listed below in appendix 2 of this report.

2.3 Interviews

The evaluation team has conducted an on-site verification on 31-January-2024 to 01-February-2024. PP representatives and the end users/beneficiaries as listed in section 2.1 were interviewed. The table includes information on the interviewees.

The identified beneficiaries based on the above criteria chosen randomly from the beneficiary monitoring survey sampling database is as follows:

Sl. No.	Stove ID/Unique Number	Date of Commissioning	Household Head Name	Interview date	Village of Udalgiri district Name	Interviewer
1	123192	10-01-2022	Paltu Munda	31-January-2024	No.1 Sonajuli	Dr. Atul Takarkhede (TL /TE)
2	124144	11-01-2022	Jaymati Bhyan	31-January-2024	Banseria	
3	127961	27-12-2021	Dipali Topo	31-January-2024	Dingdangpara	Mr. Ravi Jangid (Observer)
4	129284	27-01-2022	Rupali Sarmah	31-January-2024	Dharanighat	
5	132984	04-01-2022	Manika Das	31-January-2024	Dahalachuba	Mr. Sarthak Jain (Observer)
6	134451	18-01-2022	Binita Baishya Kalita	31-January-2024	Paneri	
7	139101	03-02-2022	BAINAISHRI BORO	31-January-2024	Darogachuba	
8	139588	26-01-2022	Malati Boro	31-January-2024	Tangla	
9	141681	08-02-2022	KANJABALA RAJBONSHI	31-January-2024	Tangla Town	
10	144534	09-02-2022	Pingky Daimary	31-January-2024	Majuli	
11	148459	03-03-2022	Dimbeswari Nath	01-February-2024	Madeli Gaon	
12	152266	07-03-2022	Rahit Thakur	01-February-2024	KHANKHALAB ARI	
13	127112	28-12-2021	Jwahani Kujur	01-February-2024	Atterighat	
14	133604	20-01-2022	Ananiti Horo	01-February-2024	Shagunbahi	
15	140483	31-01-2022	Chahami Munda	01-February-2024	Orangajuli	

The following persons from the project proponent are interviewed during the course of verification.

S.I No	Name of Associates	Designation	Company
1	Mr. Anantrao Hindurao Patil	Manager (Operation)	EKI Energy Services Ltd
2	Mr. Raju Sah	Executive, Operation	EKI Energy Services Ltd
3	Mr. Bikash Hazarika	Field Executive	BIBSIKHA LLP (Third party vendor)

The topics discussed during the interview range from the project's general characteristics and implementation to its technical details, including design and technical specifications, project implementation status, project start date, location, baseline identification, monitoring survey, data recording and archiving procedures, baseline stove use, stakeholders grievance mechanism and ongoing consultation.

The evaluation was created using the interview input together with the analysis of registered joint PD&MR/1/ and observations.

2.4 Site Visits

The verification team visited the site on 31-January-2024 to 01-February-2024, to perform the following tasks:

- A review of information flows for generating, aggregating, and reporting the monitoring parameters;
- Interviews with relevant personnel to ascertain whether the operational and data collection procedures are carried out in accordance with the monitoring plan in the registered VCS Joint PD and MR/1/;
- A cross check of the information collected during the above-mentioned processes. /9/
- A comparison of the ICS functioning, observations of monitoring practices, applied methodology/4/, including relevant tool(s), and, if appropriate, the applied standardized baseline, to the registered VCS Joint PD&MR/1/ and relevant standards;
- A review of the calculations and presumptions used to calculate the GHG data and emission reductions;
- A determination of the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
- In order to decrease audit risk to an acceptable low level and to obtain a fair degree of certainty for the current verification, the assessment team has verified adequate appropriate audit evidences.

Details of households visited are discussed in section 2.3.

2.5 Resolution of Findings

The goal of this step is to identify, discuss, and draw conclusions about any problems that may affect the registered project activity's ability to reduce emissions or have an impact on the recording, monitoring, and reporting of those reductions. These problems may be related to the sampling size, monitoring parameters and monitoring plans, implementation status, or operations of the registered project activity. Based on the desk review and site evaluation, this was carried out. The verification team creates and/or maintains verification procedures (internal document) that documents conformities and non- conformities, which may include the following kinds of issues:

If one of the following occurs, a CAR (Corrective Action Request) is raised:

- the project proponents have not adequately recorded their non-compliance with the project description, the monitoring methodology and its tools are not applicable, the additionality instruments are not sufficient, or the evidence provided to demonstrate conformity is insufficient;
- If the project proponents have not appropriately recorded any non-conformance with the monitoring plan, methodology, or standard baseline when monitoring and reporting is performed, or if there is insufficient evidence to support conformity;
- The project proponents have not appropriately documented changes to the implementation, operation, and monitoring of the registered project activities;
- The quantity of emission reductions will be impacted by errors in the application of assumptions, data, or computations;
- The project proponents have not addressed problems identified in a FAR during verification that need to be confirmed during verification or in a prior verification.

If there is inadequate or unclear information to assess the relevant VCS standards and guidelines have been satisfied, a clarification request (CL) is made. Prior to submitting a request for registration and issuance, any CAR and CR that the LGAI Technological Center, S.A. (Applus+ Certification) raised during verification must be addressed.

04 Corrective Action Requests (CARs) and 05 Clarification Requests (CLs) were raised during verification and successfully closed. FAR was not raised during this verification period. There was no FAR from the previous verification.

Appendix 4 contains all the findings that are brought forward and shared with project proponents during the verification. The section also covers the project proponents' responses, if any, and the verification team's evaluation subsequently for any open findings.

2.5.1 Forward Action Requests

The project activity is undergoing Verification under VCS, and no FAR issues have been raised.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as LGAI Technological Center, S.A. (Applus+ Certification) holds the accreditation for Validation of projects under this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

The project activity has applied correct methodology, VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, version 1.1/4/ which is as per the registered VCS joint PD&MR^{1/}. Thus, no deviation is sought regarding the methodology. The project complies with all the requirement of the methodology and thus deviation to the methodology is not a requirement for the present project activity.

3.2 Project Description Deviations

During previous monitoring period (i.e., 2nd MP), One deviation over project description was approved by VVB. Details of that deviation are provided below;

1. In section 6.1 of the approved joint PD & MR (VCS-Joint_PD-MR-v3_2939__clean.pdf), the value of $B_{y=1, \text{ new, i, survey}}$ was mentioned as 1.825 tonnes /device/year whereas during first monitoring period, based on survey results the value of $B_{y=1, \text{ new, i, survey}}$ was found to be 1.656 tonnes /device/year (4.54 Kg/day/stove) and same was used for actual ER calculation for the previous monitoring period. This was a typographical error in the registered joint PD MR. Therefore, it is being corrected now in the table for “Data and Parameters Monitored” under the section 4.4 of this MR.

This deviation doesn't impact the applicability of the methodology, additionality or appropriateness of the baseline scenario or the emission reduction calculations. The nature of deviation is permanent and this change shall be applicable for the subsequent verifications as well. Thus, accepted by VVB

2. During current monitoring period, PP applied for project description deviation of permanent nature. The deviation is regarding typo error made under section 1.12 of VCS approved joint PD and MR. Wrong SDG indicator number was mentioned in the approved joint PD and MR, same has been rectified by PP in monitoring period. PP has mentioned SDG indicator 1.4.1. in registered Joint PD MR and now corrected the SDG indicator to 1.1.1 in MR. PP mentioned the details of above deviation in section 3.2.2 of monitoring report. Same has been approved by VVB as there is no effect over project methodology, additionality, appropriateness of baseline scenario and emission reduction. Thus accepted.

3.3 New Project Activity Instances in Grouped Projects

No new project activity instances are included under this grouped project during the current monitoring period. Therefore, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:			
Audit history	Audit type	Period	Number of years	Validation/verification body name
	VCS Joint Validation and Verification	21-December-2021– 31-May-2022	0.444	TÜV SÜD South Asia Pvt. Ltd
	VCS Verification	01-June-2022 to 31-January-2023	0.671	LGAI Technological Center, S.A (Applus+ Certification)
	VCS Verification	01-February-2023 to 31-December-2023	0.915	LGAI Technological Center, S.A (Applus+ Certification)
	Total	21-December-2021 to 31-December-2023	2.030	

	The above audit history of the project has been verified and confirmed by the assessment team from the VERRA project portal/01/ , previous perioding verification reports/01/, previous perioding joint PD-MR/1/ and previous perioding MR/1/.
Double counting and participation under other GHG programs	The project is not receiving or seeking credit for reductions and removals from a project activity under another GHG program. The project proponent has submitted an undertaking/10/ to the verification team declaring that the project is not registered under any other carbon standard or rejected or under the process of registration or shall apply for registration in future in any other GHG program. The assessment has checked the websites of other carbon registries like Clean Development Mechanism (CDM)/11/, Gold Standard (GS)/12/ and Global Carbon Council (GCC)/13/ etc. and found that the project is not registered under any other carbon standard.
No double claiming with emissions trading programs or binding emission limits	The project is not receiving or seeking credit for reductions and removals from a project activity under other emissions trading programs or binding emission limits. The project proponent has submitted an undertaking/10/ to the verification team declaring that the project is not claiming any credit under any other emissions trading programs or binding emission limits. This has also been confirmed by the assessment team by interview with the concerned person from the project proponent.
No double claiming with other forms of environmental credit	The project is not receiving or seeking any other forms of environmental credit for reductions and removals from a project activity. The project proponent has submitted an undertaking/10/ to the VVB team declaring that the project is not claiming any other form of environmental credit under any other emissions trading programs or binding emission limits. The assessment team has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team.
Supply chain (scope 3) emissions double claiming	The project proponent is not involved in any other business activity where it can act as a buyer or seller of a product whose emission footprint is changed by the project activity. This has

	been confirmed by the assessment team by interview with the concerned person from the project proponent.		
Sustainable development contributions	As declared by the project proponent in section 1.12 of the monitoring report/2/, the project contributes to below sustainable development goals:		
	SDG	SDG Target	SDG Indicator
	1	1.1	1.1.1 Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)
			VVB assessment
			The project contributes to this SDG by uplifting the income level of the local population above the international poverty line i.e. INR 15,000 to 17,000 per month and during the current monitoring period has also increased income level of approximately 300 persons till date from implementation of the project. The employment records/15/ submitted by the project proponent has been verified verification team along with the previous periodic verification reports/1/ and the current monitoring report/02/ to confirm the same.
	3	3.9	3.9.1 Mortality rate attributed to household and ambient air pollution
			During current monitoring period project activity contributes to this SDG by Reducing the fine particulate matter (PM2.5) in 34,000 households emitted during cooking thereby improving overall health outcomes and reducing burdens of disease. The beneficiary households were interviewed during onsite verification and found to have improved their cooking experience in term of health condition and reduction of smoke.

	4	4.7	4.7.1 Project specific indicator: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	The project proponent provides adequate informal training to the distributor's team involved in the distribution and bring awareness about importance of sustainable development, health, and nutrition wellbeing during the current monitoring period. Training records/16/ submitted by the project proponent are verified by the verification team and found to be appropriate.
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	5	5.4	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location	The project has resulted reduction in consumption of fire wood used for the cooking purposes of the rural beneficiaries. This has consequently, decreased the reducing drudgery and time spent by the rural population especially, women and children by average of 1 hour/day during the current monitoring period. The rural households were interviewed during onsite audit by the verification team to assess the impact and found satisfactory.
	7	7.1	7.1.2 Proportion of population with primary reliance on clean fuels and technology	The project contributes to this SDG by increasing access to clean cooking technology with ICS installations in 34,000 households under the project activity. The verification team has cross-checked the ICS distribution database/7/ maintained by the project proponent to confirm the number of improved cookstoves distributed in the project activity.
	8	8.3	8.3.1 Proportion of informal employment in total employment, by sector and sex.	The project contributed to this SDG by providing employment to the rural population. The project has provided employment to a total of 600 male and female employees since start of the project till date out of which 307 are male and female employees are employed for ICS distribution and monitoring activity. The Employment records/15/ provided by the project proponent has been verified to confirm the same.

	9	9.3	9.3.1 Proportion of small-scale industries in total industry value added.	The project has contributed to this SDG by promoting small-scale industries by manufacturing improved cookstoves in the local manufacturing unit of Swami Samarth Electronics Pvt. Ltd. The purchase order/17/ for the improved cookstoves sourced from Swami Samarth Electronics Pvt. Ltd. Are verified and found to be appropriate.									
	13	13.2	13.2.2 Total greenhouse gas emissions per year	The project contributes to this SDG by avoiding GHG emission due to reduction in consumption of non-renewable biomass in cooking process by the rural households in the Assam state of India. The project has avoided 375,531 tCO₂e being emitted to the environment till date i.e. from the date of commissioning of the project till end of this monitoring period. <table><tr><th>Verification Term</th><th>ER Value (tCO₂e)</th></tr><tr><td>1st Verification</td><td>62,977</td></tr><tr><td>2nd Verification</td><td>133,365</td></tr><tr><td>3rd Verification</td><td>179,189</td></tr><tr><td>Total till date</td><td>375,531</td></tr></table> The project has avoided 179,189 tCO₂e in the current monitoring period. This has been verified from the previous periodic verification reports/1/ and the current monitoring report/2/.	Verification Term	ER Value (tCO ₂ e)	1 st Verification	62,977	2 nd Verification	133,365	3 rd Verification	179,189	Total till date
Verification Term	ER Value (tCO ₂ e)												
1 st Verification	62,977												
2 nd Verification	133,365												
3 rd Verification	179,189												
Total till date	375,531												

		15.3	15.3.1 Proportion of land that is degraded over total land area	The project contributed to this SDG by reducing consumption of non-renewable woody biomass by the rural households due to the usage of improved cookstoves for their cooking purpose. The project has reduced 242,052 tons of woody biomass till date i.e. from the date of implementation of the project till end of this monitoring period. The project has reduced 102,665 tons of woody biomass in the current monitoring period. This has been verified from the previous periodic verification reports/1/ and the current monitoring report/2/.
Additional information relevant to the project	No commercially sensitive information has been mentioned in the monitoring report to have been excluded from the public version of the project documents. This has also been confirmed during interview with the concern person from the project proponent.			

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	There has not been any change to the stakeholder makeup since validation of the project. The project had identified household owners (end users), distributors, and their representatives as stakeholders. This selection is based on their significant positive impact resulting from the project activities. The verification team concludes that composition of stake holder category for the project activity has remained unchanged.
Legal or customary tenure/access rights	The project proponent holds the right of the project and the carbon credits to be generated from the project. The declarations from the manufacture and distributor/10/ and the end user agreements/18/

	executed by the project proponent with the households demonstrated the ownership right of the project proponent with the projects. The documents are reviewed by the verification team as found appropriate. The manufacturer of the ICSs holds factory ownership and land-use rights, granted through specific legal statutes, for their production facility. End-users possess rights to the ICS, which are secured through an end-user agreement established between the Project Proponent and the end-users.
Stakeholder diversity and changes over time	All the instances are situated in the Udalguri district of state Assam, characterized by a rich tapestry of social, economic, and cultural diversity. The project's impacts on stakeholder diversity over time are as follows: <u>Social Diversity:</u> The project promotes social inclusivity through community engagement for cook stove operation. The efficient use of firewood reduces the time spent by women and children gathering fuel, enabling them to allocate saved time to other productive activities. No negative impacts on social diversity have been identified. <u>Cultural Diversity:</u> The project encourages participation from individuals of diverse cultural backgrounds, fostering cultural harmony within the project location. No adverse effects on cultural diversity have been observed. <u>Economic Diversity:</u> The project contributes to the local economy by providing employment opportunities for both skilled and unskilled labour. No detrimental effects on economic diversity have been recorded. The verification team thus concludes that stakeholder diversity and the impact of the project has not changed negatively over time.
Expected changes in well-being	The distribution of energy-efficient cook stoves in the project area is expected to bring about substantial positive changes in various dimensions of well-being and stakeholder characteristics as compared to the baseline scenario. Environmental benefits include a reduction in deforestation due to the efficient utilization of firewood and improved air quality, particularly reducing indoor smoke pollution and enhancing respiratory health. Social impacts involve time savings for women and children, empowerment of women through decreased daily workloads, and overall improvements in health. On the economic

	front, households are expected to experience direct financial benefits through fuel savings, and the project creates job opportunities, fostering economic development within the community. These changes collectively contribute to the project's overarching goal of promoting sustainability and enhancing the overall quality of life for stakeholders in the state of Assam. PP has confirmed the changes by conducting the household survey.
Location of stakeholders	In the context of the project activity all the instances are situated within the geographical boundaries of India, specifically in the district of Udalgiri, Assam, anticipated positive changes in well-being and stakeholder characteristics include: <u>End-User Well-being:</u> <u>Time Saving:</u> End-users experience improved well-being through time savings in wood collection and cooking activities. <u>Enhanced Safety:</u> The adoption of Improved Cook Stoves (ICSs) leads to less smoke and improved safety during cooking operations. Indigenous People's Well-being: <u>Employment Opportunities:</u> Indigenous people in the project area benefit from increased employment opportunities arising from the manufacturing and distribution of ICSs. These expected changes underscore the positive impact of the project on the well-being of end-users and indigenous communities, aligning with improvements in time efficiency, safety, and economic opportunities. Further, verification team crosschecked the end user agreement of all the stakeholder which were made based on the KYC details during the onsite visit.
Location of resources	In terms of the location of territories and resources owned or accessed by stakeholders, it can be stated that the end-user possesses ownership of their respective houses where Improved Cook Stoves (ICSs) have been installed. Additionally, the manufacturer of ICSs holds ownership of their factory. Further, verification team crosschecked the end user agreement of all the stakeholder which were made based on the KYC details during the onsite visit and also checked the local government identity cards too.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	As a part of on-going communication with local stakeholders, end users were informed about grievance register. The distributors have the responsibility to take grievances regarding the project activity and same was to be conveyed to PP during operation of project activity. Thus, ongoing communication of stakeholders was followed through grievance mechanism. If any concerns received during operation of project activity, same were to be addressed if relevant to project.
Date(s) of stakeholder consultation	18-December-2021
Communication of monitored results	The monitoring results are communicated from the distributors to the end users through the distributor's representatives.
Consultation records	The MOM (Minutes of meeting) is being maintained by the distributors for submission of input/ grievance (if any) related to the project activity. The queries by stakeholders (during question-and-answer session) are noted and documented in the grievance register. The grievance register/19/ maintained at project site submitted is verified by the verification team which is found appropriate. The beneficiary households are provided with unique ID cards mentioning the basic details e.g. name and address of the beneficiary, unique IDs and date of distribution along with customer support contact number, a live telephone number service maintained by the project proponent to address the operational issues faced by the beneficiaries. The ID cards/20/ of the beneficiaries were physically verified during onsite audit by the verification team and found appropriate. As a crosscheck purpose, the verification team also checked the grievance redressal mechanism by direct calling the customer support telephone number mentioned in the beneficiary ID cards. The verification team found the assistance procedure from the helpline number to be satisfactory.
Stakeholder input	There has been no grievance received for the current monitoring period. The beneficiary households interviewed during the onsite audit

	were found to be satisfied with the cookstoves distributed to them and no adverse opinion was shared by any of them. There are no such comments received till date which necessitates any updates in the project design.
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4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	Following clause 3.18.8 of VCS standard v.4.6/5/, the project proponent has disclosed. 1. the minimum information, including the nature, size, pace, reversibility, and scope of the cook stove project activity; 2. the reason/purpose of the project, which is to efficiently use non-renewable biomass fuel and reduce other environmental and health hazards for the community; 3. the duration of the project activity, set at 21 years; 4. the locations that will be affected, primarily the villages in Udalguri district of state Assam; and 5. a preliminary assessment of the likely economic, social, cultural, and environmental impact. Stakeholders were briefed that the project would bring solely positive effects on economic, social, cultural, or environmental aspects, including savings in non-renewable biomass fuel and increased employment opportunities. 6. Moreover, information regarding personnel likely to be involved in the execution of the project, including Indigenous Peoples, private sector staff, research institutions, government employees, and others, was shared with stakeholders, clarifying that they would be the end-users/beneficiaries of the project activity. Hence, it is evident that the affected community was informed prior to the operational date of the project activity, and the same verified by end user agreement between PP and beneficiaries.

	There are no ongoing or unresolved conflicts outcomes of which the project may exacerbate or influence.
Outcome of FPIC discussion	The project devices (project cook stoves) are installed in the households of these beneficiaries on their own will and the project proponent has executed transparent agreements with these beneficiaries. End-users possess rights to the ICS, which are secured through the end-user agreements established between the Project Proponent and the end-users. The verification team has verified the sample end user agreements/18/ and found appropriate. Thus, the verification team concluded that that the project has not encroached on land, relocated people without consent, and forced physical or economic displacement.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	Feedback register/ Grievance register is kept at distributor office where stakeholder grievances are registered if received any. In the current monitoring period no such grievances has been received. The grievance register/19/ maintained at distributor office has been submitted to the verification team .
Grievance redress procedure	The beneficiary households are provided with unique ID cards mentioning the basic details e.g. name and address of the beneficiary, unique IDs and date of distribution along with customer support contact number, a live telephone number service maintained by the project proponent to address the operational issues faced by the beneficiaries. The ID cards/20/ of the beneficiaries were physically verified during onsite audit by the verification team and found appropriate. As a crosscheck purpose, the verification team also checked the grievance redressal mechanism by direct calling the customer support telephone number mentioned in the beneficiary ID cards. The verification team found the assistance procedure from the helpline number to be satisfactory.

	Stakeholders' feedback is monitored daily and any grievance if found, resolved immediately. The grievance register/19/ maintained at project site submitted is verified by the verification team which is found appropriate. PP also periodically shares SMS with information and the customer care number for end users to reach out. Process for Handling Grievances: • Receipt of Complaints: a) On customer care number: When end users call the customer care number, the Project Proponent (PP) at the Head Office (HO) register the complaint. b) Through Field Officers: Field officers visit beneficiaries, collect complaints, and share them with the HO for resolution. • Sharing of Complaints: PP then shares the complaint with their local representative. • Resolution: The local representative works to resolve the grievance. • Closure of Complaints: Upon addressing the complaint/grievance, PP closes it in the register.
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4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No Comments Received	No new ICS were added in this monitoring period hence, no stakeholder consultation carried out during this monitoring period.	There are no actions necessary, no public comments were received during the current monitoring period, and there are no outstanding activities from the last public commenting period which were cross-checked from grievance records.

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	There are no exclusions, communication breakdowns, or hurdles in the project activity that may hinder stakeholders from engaging or participating, hence Not Applicable.
Working conditions	Using ICS is a safer means of cooking than the typical cookstove, therefore it will rather lower the safety risk, hence Not Applicable.
Safety of women and girls	In Indian rural areas, women and girls are mostly responsible for wood gathering. Reducing wood usage has decreased the number of trips necessary for wood collecting, therefore boosting the safety of women and girls, hence Not Applicable.
Safety of minority and marginalized groups, including children	Using ICS is a safer way to cook than a traditional cookstove, therefore it will improve the safety of minority and disadvantaged people, particularly children, hence Not Applicable
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	The project activity poses no danger of pollutant creation. Rather, this project activity improves air quality with its efficient wood combustion technology, hence Not Applicable

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	The project proponent strictly follows the national laws prohibiting discrimination and sexual harassment, specifically the project complies with the Immoral Traffic (Prevention) Act, 1956 ³ , which prohibits human

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https://www.indiacode.nic.in/bitstream/123456789/15378/1/the_immoral_traffic_%28prevention%29_act%2C_1956.pdf

	trafficking for the purpose of commercial sexual exploitation or forced labour and the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013 ⁴ , also known as the PoSH Act. There has been no reports of discrimination and sexual harassment for this monitoring period. This has been confirmed by interview with the concerned person from the project proponent.
Management experience	There is no new entity involved in project design or implementation, demonstrate the management experience of such entities. Hence, not applicable.
Gender equity in labor and work	The project proponent provides equal opportunities in the context of gender equity and pay for labour and work. This has been confirmed by interview with the concerned person from the project proponent.
Human trafficking, forced labor, and child labor	Project activity does not use victims of human trafficking, forced labour, and child labour. This has been confirmed by interview with the concerned person from the project proponent. The employment record/15/ submitted by the project proponent is also checked by the verification team to confirm the same.

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	The representative of the project proponent has clarified and declared during interview that that there will be no human rights violation of any kind to any of the stakeholders during implementation and operation of the project activity and same verified during interview with the stakeholders amid on site visit.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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<https://wcd.nic.in/sites/default/files/Handbook%20on%20Sexual%20Harassment%20of%20Women%20at%20Workplace.pdf>

Preservation and protection of cultural heritage	Since the project activity comprises the production and distribution of cook stoves, which are wholly manufactured outside of the beneficiary's territory, no physical cultural heritage has been harmed. Furthermore, the project activity has had no detrimental influence on the stakeholders' non-tangible cultural heritage; rather, it promotes cultural peace by incorporating multiple groups while without changing their practices, traditions, or beliefs. As a result, the project's ongoing operation includes the preservation and protection of cultural treasures..
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4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Disputes over rights to territories and resources	There is no dispute over territories or resources involved in the project activity. The improve cookstove project does not involve any land acquisition in it, the project activity involves the production and distribution of cook stoves, entirely manufactured outside the beneficiary's land, hence, no tangible cultural heritage has been hampered for the project activity.
Respect for property rights	This project activity involves distribution of improved cook stoves, which has entirely been manufactured outside the beneficiary's land. Hence, no land/property of the stakeholders, IPs, LCs, and customary rights holders has been incorporated. Additionally, the project activity has obtained the free, prior and informed consent of the end users (beneficiaries including the IPs, LCs, and customary rights holders) through the end users agreements executed with the beneficiaries/18/. This ensures that their lands are property rights are protected and respected.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Summary of the benefit sharing plan	Not Applicable, as the project activity involves the production and distribution of cook stoves, which has entirely been manufactured outside the beneficiary's land. Hence, no land/property of the stakeholders, IPs, LCs, and customary rights holders has been incorporated, and no benefit sharing.
Benefit sharing during the monitoring period	Not Applicable, as the project activity involves the production and distribution of cook stoves, which has entirely been manufactured outside the beneficiary's land. Hence, no land/property of the stakeholders, IPs, LCs, and customary rights holders has been incorporated, and no benefit sharing.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No impact on biodiversity is likely to be caused due to the improved cookstove distribution project.
Soil degradation and soil erosion	The project activity mitigates soil degradation and erosion by minimizing the extensive need for wood gathering, thereby reducing deforestation and soil exposure
Water consumption and stress	This project activity does not have any negative impacts on water consumption and does not lead to water stress in any way.
Usage of fertilizers	There is no dedicated plantation is involved in the project. So, no fertilizers are used in the project. Hence, this is not applicable.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	Not Applicable. Since, the project activity involves the production and distribution of ICS, which are not located in or near habitats for rare, threatened, or endangered species, this section is not relevant.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable	Not Applicable, The following section is not required for this project as there is no planting or species introduction in the current project activity.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable	Not Applicable, The following section is not required for this project as there is no planting or species introduction in the current project activity.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Not Applicable, This part is not necessary since this project is not an ARR, ALM, WRC, or ACoGS project, hence section is not applicable.

4.3 Accuracy of Reduction and Removal Calculations

The verification team has conducted onsite audit and interviews with concerned onsite persons, households, physically verified the operational improved cookstoves and has reviewed documents; assessment team concluded that the project activity is implemented and operated in-line with the registered VCS joint PD-MR/1/. 34,000 nos. of ICS have been installed in the current project activity. There is one minor change in labelling SDG indicator and no major change in the project design or operation and monitoring practices at site which can alter the applicability or design of the project activity. In addition to the interviews with rural households, representatives of project proponent and physical inspection of the cookstoves, assessment team have checked the all the documentation and found that the project activity is implemented as per the registered VCS joint PD-MR/1/ and Monitoring report/2/ submitted by the project proponent for the current monitoring period.

Parameters fixed ex ante:

Means of verification	The data and parameters fixed ex ante have been checked from the registered VCS joint PD-MR/1/, applied methodology the applied methodology VMR0006, ver. 1.1/4/ and IPCC. 1. Fraction of woody biomass “$f_{NRB,y}$” saved by the project activity during year y that can be established as non-renewable biomass- Value of 0.852 has been calculated as per TOOL30: Calculation of the fraction of non-renewable biomass”
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	- Net calorific value “$NCV_{wood\ fuel}$” of the non-renewable woody biomass that is substituted or reduced- Value of 0.0156 TJ/tonne as specified by the methodology AMS II.G ver.10 default (2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 1 Introduction). - CO₂ emission factor “EF_{wf, CO_2}” for the use of wood fuel in baseline scenario - Value of 112 tCO₂e/TJ as per IPCC default values. - Non-CO₂ emission factor “$EF_{wf, non\ CO_2}$” for the use of wood fuel in baseline scenario Value of 26.23 tCO₂e/TJ as per IPCC default values - Efficiency of baseline cookstove “η_{old}” Value of 0.1 as per methodology/4/ default value. This is accepted as baseline scenario was 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. - Efficiency of project stove “η_p” at the start of project activity. - Value of 32.19% as per manufacturer specifications - Discount factor “$(DF_n)^{y-1}$” to account for efficiency loss of project cookstove per year of operation (fraction)- Value of 0.99 as per methodology default value. - Operating lifetime “Life span” of project device for projects opting Equation 5 of the methodology/4/ for determining project stove efficiency- 7 years as per manufacturer specification. The verification team has checked the ex-ante fixed values from the registered VCS joint PD-MR/01/ and confirmed that the values are used correctly in the monitoring report/2/ and emission reduction calculation sheet/3/.
Findings	No finding was raised.
Conclusion	The verification team concludes that the values of ex-ante parameters are correctly sourced from the registered documents/1/ to be used for emission reduction calculation.

Parameters monitored:

Means of verification	The verification of the parameters required by the monitoring plan is provided as follows:	
	Data/ Parameter:	$N_{y,i,j}$
	Data Unit:	Number
	Value	34,000
	Description:	Number of project devices of type i and batch j operating during year y
	Source of data used:	ICS installation database
	Means of	The number of improved cookstoves installed have been verified from the ICS installation database/7/

	verification/Comments:	which provides the complete list of the stoves installed during each year. The type of stoves is defined as per the registered VCS joint PD and MR/1/. The project proponent has maintained the database /7/ of all the ICS installed so far in the project. A usage monitoring survey was conducted to determine the number of operating stoves of type i and batch j on a sampling basis. Measured directly or based on a representative sample as per methodology and 100 samples have been taken by the project proponent to accommodate nonresponse during monitoring. As mentioned in the registered joint PD&MR/1/, the monitoring frequency of this parameter is biennially. So, the monitoring survey conducted and applied for emission reduction is as per the registered joint PD-MR and is assessed to be valid for the current monitoring period. Survey Procedure – Since the population of the project region is homogeneous in nature, considering the selection of end users based on specific criteria “simple random sample” is considered for selection of end users from each instance by the project proponent. However, care has been taken to select end users from the entire geographic outreach covered under each instance. PP has selected more than 100 samples for survey and average value of biomass consumption per cook stove is considered for ER calculations. VVB further has cross-checked the sampling approach by the project proponent as per MR against registered VCS joint PD & MR/1/. This is in line with the registered VCS joint PD-RM and hence, acceptable to the verification team.	
	Cross-check	Survey results checked and it was found 100% stoves were operational out of total sample size selected. The verification team has conducted on site verification on sample basis from the households selected by the project proponent for the monitoring survey; all of the audited and interviewed households were found to be using the	

	distributed improved cookstoves for their cooking purpose.												
	VVB used sampling during verification for checking the operational status in the households. The sampling done by VVB reflects the population of the project activity, independent from the samples that the project proponent surveyed for monitoring. VVB applied paragraph 26 of the Standard, Sampling and surveys for CDM project activities and programmes of activities, version 09. In accordance with the paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team and accordingly steps listed in paragraph 29 of the sampling standard shall be followed. The verification team has opted for AQL of 0.5% and UQL of 20%; producer risk and consumer risk of 10% in determining the VVB's sample size. A sample size of 08 (conservatively total 15 no's household) households was chosen (with no discrepant records). A sample size of 08 was determined, based on an AQL of 1.0 % and UQL of 20%, producer risk 10% and consumer risk 20%. Acceptance number (c) thus determined for the sample is 0. VVB interviewed 08 samples (each, for monitoring survey). It was observed that out of the 08 samples, all the 08 stoves were found to be operational, and this matched with the PP's records and hence no discrepant records were observed with the MR and ER sheet and thus c=0. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09. Verification team has cross verified these sample documents.												
	<table border="1"> <tr> <td>Data/ Parameter:</td><td>$B_{y=1,new,i,j,survey}$</td></tr> <tr> <td>Data Unit:</td><td>Tonnes</td></tr> <tr> <td>Value</td><td>1.656</td></tr> <tr> <td>Description:</td><td>Annual quantity of woody biomass used by improved cook stoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey</td></tr> <tr> <td>Source of data used:</td><td>Monitoring Survey results</td></tr> <tr> <td>Means of verification/Comments:</td><td>The annual quantity of woody biomass used by the improved cook stoves was determined from the result of the 1st monitoring survey. This has been sourced from the registered joint PD-MR/1/ by the project proponent for calculation of emission reduction calculation. The parameter determined during the 1st monitoring survey is fixed for the remaining duration of the 1st crediting period as per</td></tr> </table>	Data/ Parameter:	$B_{y=1,new,i,j,survey}$	Data Unit:	Tonnes	Value	1.656	Description:	Annual quantity of woody biomass used by improved cook stoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey	Source of data used:	Monitoring Survey results	Means of verification/Comments:	The annual quantity of woody biomass used by the improved cook stoves was determined from the result of the 1 st monitoring survey. This has been sourced from the registered joint PD-MR/1/ by the project proponent for calculation of emission reduction calculation. The parameter determined during the 1 st monitoring survey is fixed for the remaining duration of the 1 st crediting period as per
Data/ Parameter:	$B_{y=1,new,i,j,survey}$												
Data Unit:	Tonnes												
Value	1.656												
Description:	Annual quantity of woody biomass used by improved cook stoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey												
Source of data used:	Monitoring Survey results												
Means of verification/Comments:	The annual quantity of woody biomass used by the improved cook stoves was determined from the result of the 1 st monitoring survey. This has been sourced from the registered joint PD-MR/1/ by the project proponent for calculation of emission reduction calculation. The parameter determined during the 1 st monitoring survey is fixed for the remaining duration of the 1 st crediting period as per												

		the option selected at the time of project validation/registration by the project proponent. The registered VCS joint PD-MR/1/ has been verified by the verification team and confirmed that the value of the parameter has been correctly used for emission reduction calculation/3/		
	Cross-check	The VCS joint validation-verification report/1/ of the project and previous periodic monitoring report and verification report/1/ are cross-checked by the verification team to confirm the correctness of the value of the parameter. For the current Monitoring Period (MP), the value of Annual quantity of woody biomass used by the improved cookstoves in tonnes per device of type i and batch j ($B_{y=1,new,i,j,survey}$) for the improved cookstove distributed as a part of the project activity was determined by measurement campaigns at the representative households along with sample surveys. The assessment team crosschecked this value by examining a sample of project proponents' samples (i.e., 15 households) through questionnaire operation surveys and interviews, including activities such as: Ensuring consistency between the information recorded in the Survey sheet and the data obtained from on-site interviews and confirmed that there is no baseline stove are in continuation. All households are using ICS only. This process was carefully documented, and the validation and verification body (VVB) thoroughly reviewed the calibration records. Additionally, the monitoring report (MR) outlined robust (QA/QC) procedures that align with the requirements specified in VCS PD /01/. These measures were implemented to ensure accurate and reliable data collection throughout the project, promoting confidence in the reported results and the calculation of Verified Carbon Units (VCUs). This thorough verification process helps ensure the accuracy and validity of the verified value used by the project proponent in the current Monitoring Period		
	Data/ Parameter:	$\eta_{new,y,i,j}$		
	Data Unit:	Fraction		
	Value	Year (y)	$\eta_{new,y,i,j}$	

		1	30.26%	
		2	29.96%	
		3	29.66%	
	Description:	Efficiency of the improved cookstove type i and batch j determined using equation 5 of applied methodology during year y		
	Source of data used:	calculation		
	Means of verification/Comments:	The value of this parameter has been determined from the calculation provided in ER sheet, Same is found correct.		
	Cross-check	This parameter has been calculated using equation 5 of the applied methodology		
Findings	CAR 02 was raised and closed successfully.			
Conclusion	The monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS joint PD-MR/1/. All parameters were monitored and determined as per the registered monitoring plan/1/. The substantiation of this conformity on information flow for these parameters including the values in the monitoring reports is reported in the above during the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method, the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. After appropriate corrections, carried out by the project proponent, it is confirmed that all monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. All parameters required to be monitored are recorded at the intervals required by the registered monitoring plan and the applied methodology. On the basis of review of source and nature of available evidences and records, the verification team confirms the quality of evidence for emission reduction provided is sufficient as per the VCS standard, version 4.6/5/.			

Accuracy of GHG reduction calculation:

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved are presented appropriately in the monitoring report/2/ and emission reduction calculation sheet/3/. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the registered joint VCS PD-MR/1/.
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Actual ER calculations for the project activity for the current monitoring period of 01-February-2023 to 31-December-2023 are -

(1) Determining the no. of ICS ($N_{y,i,j}$) for the current monitoring period

$$N_{y,i,j} = 34,000 \text{ No's ICS}$$

(2) Determining the efficiency of ICS during the current monitoring period

$$\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94$$

Where,

$$\eta_p = 32.19\%$$

$$DF_n = 0.99$$

$$\text{Hence, } \eta_{new,y,i,j} = 32.19\% \times (0.99)^{(2-1)} \times 0.94$$

$$= 29.96\%$$

(3) Determining the quantity of woody biomass that is saved in tons for the current monitoring period

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

$$B_{y=1,new,i,survey} = 1.656$$

$$B_{y,savings,i,j} = 1.656 \times [(0.2996/0.1) - 1]$$

$$= 3.31 \text{ tons}$$

Year	Period	$B_{y=1,new,i,survey}$	$\eta_{new,y,i,j}$	η_{old}	$B_{y,savings,i,j}$
2023	01-February-2023 to 31-December-2023	1.656	29.96%	0.1	3.31

Determination of emission reductions ($ER_{y,i,j}$) for the current monitoring period

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood \text{ fuel}} \times f_{NRB,y} \times (EF_{wf,CO2} + EF_{wf,non CO2}) \times N_{y,i,j} \times 0.95$$

Where,

$$B_{y,savings,i,j} = 3.31$$

	$NCV_{wood\ fuel} = 0.0156 \text{ TJ/ton}$ $f_{NRB,y} = 0.852$ $EF_{wf,CO_2} + EF_{wf,non\ CO_2} = 112 + 26.23 = 138.23 \text{ tCO}_2/\text{TJ}$ Calculation Process: The calculation for project activity is as below- <table><tr><th>Period</th><th>Number of days</th><th>Year Fraction</th><th>Number of ICS operating during year y</th><th>Efficiency of ICS during year y (%)</th><th>Quantify of woody biomass saved (ton)</th><th>Emission reductions by ICS (tCO₂e)</th></tr><tr><td></td><td></td><td></td><td>$N_{y,i,j}$</td><td>$\eta_{new,y,i,j}$</td><td>$B_{y,saving,i,j}$</td><td></td></tr><tr><td>01-February-2023 to 31-December-2023</td><td>334</td><td>334/365</td><td>34,000</td><td>29.96%</td><td>3.31</td><td>179,189</td></tr></table> Therefore, for all project activity instances, installed till end date of the monitoring period under this project: $ER_{y,i,j} = 179,189 \text{ tCO}_2$	Period	Number of days	Year Fraction	Number of ICS operating during year y	Efficiency of ICS during year y (%)	Quantify of woody biomass saved (ton)	Emission reductions by ICS (tCO ₂ e)				$N_{y,i,j}$	$\eta_{new,y,i,j}$	$B_{y,saving,i,j}$		01-February-2023 to 31-December-2023	334	334/365	34,000	29.96%	3.31	179,189
Period	Number of days	Year Fraction	Number of ICS operating during year y	Efficiency of ICS during year y (%)	Quantify of woody biomass saved (ton)	Emission reductions by ICS (tCO ₂ e)																
			$N_{y,i,j}$	$\eta_{new,y,i,j}$	$B_{y,saving,i,j}$																	
01-February-2023 to 31-December-2023	334	334/365	34,000	29.96%	3.31	179,189																
Findings	CL 2 was raised and closed successfully.																					
Conclusion	The summary for project activity instances is as below: <table><tr><th>Vintage period</th><th>Baseline emissions (tCO₂e)</th><th>Project emissions (tCO₂e)</th><th>Leakage emissions (tCO₂e)</th><th>Reduction VCUs (tCO₂e)</th><th>Removal VCUs (tCO₂e)</th><th>Total VCUs (tCO₂e)</th></tr><tr><td>01-February-2023 to 31-December-2023</td><td>179,189</td><td>0</td><td>0</td><td>179,189</td><td></td><td>179,189</td></tr><tr><td>Total</td><td>179,189</td><td>0</td><td>0</td><td>179,189</td><td></td><td>179,189</td></tr></table> VVB confirmed that achieved emission reductions have been quantified correctly and in line with the methodology mentioned in the registered VCS joint PD&MR/1/	Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)	01-February-2023 to 31-December-2023	179,189	0	0	179,189		179,189	Total	179,189	0	0	179,189		179,189
Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)																
01-February-2023 to 31-December-2023	179,189	0	0	179,189		179,189																
Total	179,189	0	0	179,189		179,189																

4.4 Quality of Evidence to Determine Reductions and Removals

Following steps were taken to verify the quality of evidences:

- Records were submitted by the project proponent as evidences to determine emission reduction;
- The records, data and information provided were found valid for the current verification period.

The documents were verified during remote assessment and when possible, were checked directly from its source;

- Interviews were performed during on-site audit with involved personnel and PP's representatives;
- The GHG emission reduction calculations were check step by step with PP's representatives; - the quality of evidences was found of adequate level by the verification team to ensure an accurate quantification of the emission reductions.

The project proponent applied measures to ensure the required confidence/precision (if required) for each sampled parameter is met, allowing for non-response and the possible removal of outliers from the sample, as part of a Quality Control/Quality Assurance system. The choice of measure applied to each parameter depends on the cost of each data collection approach and logistics required. The project proponent determined the most effective measure for each parameter from the following list:

- Oversampling: Randomly draw a sample more than the calculated number (say 20%) and collect data from each
- Buffer Group: Randomly draw additional samples (say 20%) and collect data from only for minimum numbers of ICS as per sample size calculation. If this would not result in the required sample size data would be collected from the additional ICS that were selected in the sample.
- If precision required is not achieved by reliability check, use the lower bound or upper bound of estimates of the parameter.

The sampling plan had the following procedures in place to ensure good quality data. The project proponent ensured that field personnel have reviewed, understood and agreed to follow the monitoring plan procedures, including provisions for maximizing response rates, documenting out-of-population cases, refusals and other sources of non-response. A quality control and assurance strategy has documented. Quality control and assurance strategies include addressing non-sampling errors, such as non-response or bias from interviewer. The project proponent or a competent third party designated by the project proponent with the proper skills were trained the monitoring personnel on how to properly survey households to prevent bias from interviewer. In the case a household refuses to participate, another household was chosen at random. To reduce interviewer bias, good questionnaire design and well-tested questionnaires has been used.

4.5 Non-Permanence Risk Analysis

Not Applicable

5 VERIFICATION OPINION

5.1 Verification Summary

LGA Technological Center, S.A. (Applus+ Certification) has been engaged by EKI Energy Services Limited to perform the 3rd periodic verification of the VCS project “Global Cookstove Program (EKI Phase 01)”, VCS Project ID 2939.

The management of the project proponent /owner is responsible for the preparation of the GHG emissions data and the reported/estimated GHG emissions reductions on the basis set out within the project’s Monitoring Plan in the registered VCS joint PD&MR/1/ and MR/2/ and the approved methodology, VMR0006, version 1.1/4/.

Our Verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board/6/ and VCS Standard version 4.6/5/. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification team can confirm that:

- the project is operated as planned and described in the registered VCS joint PD-MR/1/;
- the monitoring plan is as per the applied methodology, VMR0006, version 1.1/4/.
- the monitoring process in Monitoring Report/2/ is as per the registered VCS joint PD-MR/1/.
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan/1/
- The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- The monitoring system is in place and generates GHG emission reductions data;
- The GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned, during verification process.

5.2 Verification Conclusion

LGA Technological Center, S.A. (Applus+ Certification) is satisfied that a fair degree of level of assurance was achieved during the verification on the quantity of GHG emission reductions and carbon dioxide removals in tCO₂e equivalents achieved by the project during the verification period as provided in the project's GHG statement.

Verification period: From 01-February-2023 to 31-December-2023

Verified GHG emission reductions and carbon dioxide removals in the above verification period:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-February-2023 to 31-December-2023	179,189	0	0	179,189	0	179,189
Total	179,189	0	0	179,189	0	179,189

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-February-2023 to 31-December-2023	179,574	179,189	-0.21%	Verification team observed that the actual values of the parameter were available at the time of validation that's why there is only negligible percentage difference due to rounding down the actual ERs Monitoring parameter were not changed in this monitoring period. Since there was no addition of ICS from Validation

				1. $B_{y=1,new,i,j,survey}$ is fixed 2. All number of project devices founds operational 3. This parameter has been calculated at the time of validation using equation 5 of the applied methodology The distribution database and $B_{y=1,new,i,j,survey}$ is available at the time of validation & verification, no change in database and $B_{y=1,new,i,j,survey}$ since validation & verification
Total	179,574	179,189	-0.21%	-

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

No commercially sensitive information has been provided in the monitoring report.

APPENDIX 2: DOCUMENT REFERENCES

S. No	Title of Document	Version	Date
1	Registered VCS Joint PD & MR of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	03	12-January-2023
	Joint validation-verification of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	02	23-January-2023
	2 nd periodic Monitoring Report of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	04	17-November-2023
	Verification report of 2nd periodic monitoring of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: VCS ID: 2939	02	18-November-2023
2	3 rd periodic Monitoring Report of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	01	05-January-2024
	3 rd periodic Monitoring Report of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	04	30-March-2024
3	Emission reduction spreadsheet w.r.t the 3 rd periodic Monitoring Report of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	01	05-January-2024
	Emission reduction spreadsheet w.r.t the 3 rd periodic Monitoring Report of the VCS project titled, “Global Cookstove Program (EKI Phase 01)” VCS ID: 2939	02	05-January-2024
4	VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves	1.1	22-July-2021
	VCS Requirements:		

5	Verified Carbon Standard Program Guide, v4.4;	4.4	29-August-2023
	Verified Carbon Standard, v4.6;	4.6	21-March-2024
	VCS Program Definitions, Ver. 4.4	4.4	29-August-2023
	VCS Registration and Issuance Process, v4.4	4.4	4-October-2023
	VCS monitoring report template	4.3	29-August-2023
	https://verra.org/programs/verified-carbon-standard/vcs-program-details/#rules-and-requirements		
6	CDM requirements:		
	CDM project standard for project activities	03.0	9-September-2021
		03.0	9-September-2021
	https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115752577/reg_stan04_v03.0.pdf	9.0	13-September-2012
	CDM project cycle procedure for project activities Version 03.0		
	https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115831128/reg_stan06_v03.0.pdf		
	CDM Standard: Sampling and surveys for CDM project activities and programmes of activities,		
	https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210531160756223/Meth_Stan05.pdf		
7	ICS Distribution database	-	-
8	Monitoring survey result for the survey conducted 27-June-2022.		
	Data sheet of the monitoring survey of the project conducted on 27-June-2022.		
9	Site assessment – interviews of staff personnel, photographs,	-	31-January-2024 to 01-February-2024

	physical inspection of improved cookstoves		
10	Declaration/undertaking for no double counting and participation under other GHG programs, no double claiming with emissions trading programs or binding emission limits and no double claiming with other forms of environmental credit.	-	...
11	Official registry website of Clean Development Mechanism https://cdm.unfccc.int/Projects/projsearch.html	-	Last retrieved and verified on 18-February-2024
12	Official registry website of Gold Standard https://www.goldstandard.org/	-	Last retrieved and verified on 18-February-2024
13	Official registry website of Global Carbon Council https://www.globalcarboncouncil.com/	-	Last retrieved and verified on 18-February-2024
14	Official REC registry of India. https://www.recregistryindia.nic.in/index.php/publics/registered_regens	-	Last retrieved and verified on 18-February-2024
15	Employment records for the monitoring period.	-	-
16	Training records for the monitoring period.	-	-
17	Purchase order for the improved cookstoves (ICS) implemented in the project activity placed to Samarth Electronics Pvt. Ltd.	-	-
18	Sample end user agreements by the project proponent with the beneficiaries.	-	-
19	Grievance register maintained by the project proponent.	-	-
20	Sample Beneficiary ID cards	-	-

APPENDIX 3: ABBREVIATIONS

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
EB	Executive Board
ER	Emission Reductions
VCU	Verified Carbon Unit
CR	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Period
MR	Monitoring Report
MWh	Megawatt hour
PD	Project Description
PP	Project Proponent
PS	Project Standard
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation and Verification Body
VCS	Verified Carbon Standard

APPENDIX 4: FINDINGS OVERVIEW

Table 1. Remaining FAR from validation and/or previous verifications (Applicable for verification)

FAR ID	xx	Section no.		Date: xx/xx/xxxx
Description of FAR				
NA				
Project proponent response		Date: DD/MM/YYYY		
NA				
Documentation provided by project participant				
NA				
VWB assessment		Date: : DD/MM/YYYY		
NA				

Table 2. CL from this verification

CL ID	01	Section no.	4.1	Date: 21-February-2024
Description of CL				
PP requested to submit the following documents to verify the information provided in the MR.				
1. Employment records 2. Feedback/ grievance register 3. End user agreements (Sample basis) 4. Survey results for the value considered ex-ante/ex-post as the meth requirement.				
Project proponent response				Date: 23-February-2024
Following documents are enclosed here				
1. Employment records 2. Feedback/ grievance register 3. End user agreements (Sample basis) 4. Survey results for the value considered ex-ante/ex-post as the meth requirement.				
Documentation provided by project participant				
1. Employment records 2. Feedback/ grievance register 3. End user agreements (Sample basis) 4. Survey results for the value considered ex-ante/ex-post as the meth requirement				
VVB assessment				Date: 02-March-2024
PP has provided the supporting documents for further verification, after thoroughly assessment PP found documents relevant to the current project activity thus accepted to the VVB team.				
Thus, CL# 01 is closed.				

CL ID	02	Section no.	4.1	Date: 21-February-2024
Description of CL				
PP requested to submit declaration letter regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism of India.				
Project proponent response				Date: 23-February-2024
Declaration letter for avoiding double counting of emission is enclosed here				
Documentation provided by project participant				
Declaration letter for avoiding double counting of emission				

VVB assessment	Date: 02-March-2024
PP has still not provided the Declaration letter regarding avoidance of double counting of emission reductions. PP shall provide the same for further assessment. Thus, CL# 02 is open.	
Project proponent response	Date: 05-March-2024
Declaration letter for avoiding double counting of emission is now enclosed here with	
Documentation provided by project participant	
Declaration letter for avoiding double counting of emission	
VVB assessment	Date: 07-March-2024
PP has now provided the declaration letter regarding avoidance of double counting of emission reductions and found relevant to the current project activity. Thus, CL# 02 is closed.	

CL ID	03	Section no.	4.1	Date: 21-February-2024
Description of CL				
In section 4.1 of the MR, the parameter "Lifespan" has been regarded as a monitoring parameter. However, as per Section 9.3 of VMR0006 v 1.1, "Technologies that have surpassed their useful lifetime, as determined by the usage survey, are eliminated from the project and are no longer credited." ICS has a 7-year lifetime, but CP can be extended for up to 21 years. PP shall clarify how the meth's requirements will be adhered to in the grouped PA.				
Project proponent response				Date: 23-February-2024
As per manufacturer specification the technical life time of cookstove is 7 years. None of the installations have surpassed their useful lifetime in the current MP. Moreover, from the usage survey it has been found that all of the sample ICSs are in operational condition. Thus, in line with Section 9.3 of VMR0006 v 1.1 credit can be claimed for all of the installations on current monitoring period.				
Documentation provided by project participant				
NA				
VVB assessment				Date: 02-March-2024
PP has provided justification regarding lifespan of ICS and as per the manufacturer specification mentioned lifespan of 7 years, further as per the survey records also ICS are in working condition for the current monitoring period. Hence justification accepted by the VVB team. Thus, CL# 03 is closed.				

CL ID	04	Section no.	4.1	Date: 21-February-2024
Description of CL				
PP shall refer the VCS monitoring report template version 4.3 filling instructions and complete the tables accordingly.				
Project proponent response				Date: 23-February-2024
Tables are updated as per VCS monitoring report template version 4.3 in MR.				
Documentation provided by project participant				
MR V02				
VVB assessment				Date: 02-March-2024

PP has now updated the VCS monitoring report as per the latest available template version 4.3 and after thorough assessment found acceptable to VVB team.
Thus, CL# 04 is closed.

CL ID	05	Section no.	4.1	Date: 02-March-2024
Description of CL				
Under section 2 “Safeguard and stakeholder engagement” PP shall complete the entire section as per the latest available monitoring report template instructions version 4.3.				
Project proponent response				Date: 05-March-2024
Section 2 is now updated as per monitoring report template instructions version 4.3 in MR V03.				
Documentation provided by project participant				
MR V03				
VVB assessment				Date: 07-March-2024
PP has now revised the entire section 2 “Safeguard and stakeholder engagement” as per the latest available monitoring report template instructions version number 4.3, after thorough assessment found acceptable to VVB assessment team. Thus, CL# 05 is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date: 21-February-2024
Description of CAR				
Project proponent shall remove the template filling instructions throughout the monitoring report, also update the weblinks which are not accessible. Corrective action sought.				
Project proponent response				Date: 23-February-2024
Template filling instructions are removed throughout MR. Accessible weblinks provided.				
Documentation provided by project participant				
MR V02				
VVB assessment				Date: 02-March-2024
PP has now removed the template filling instructions throughout the monitoring report and now find inline with the VVB monitoring report template version 4.3 Thus, CAR# 01 is closed.				

CAR ID	02	Section no.	4.1	Date: 21-February-2024
Description of CAR				
Under Table 01: Sustainable development contributions, mentioned SDG indicator 1.4.1 for SDG 1 is not inline with the UN SDG. Corrective action sought.				
Project proponent response				Date: 23-February-2024
SDG indicator number updated as per UN SDG				
Documentation provided by project participant				
MR V02				
VVB assessment				Date: 02-March-2024

PP has now revised the indicator 1.4.1 for SDG 1, therefore PP replaced the indicator from 1.4.1 to 1.1.1 which is not inline with the registered joint PD&MR.	
Thus, CAR# 02 is open.	
Project proponent response	Date: 05-March-2024
A typographical error in the section 1.12 of the approved joint PD & MR (VCS-Joint_PD-MR-v3_2939__clean.pdf) has been corrected in this MR. The SDG indicator number was mistakenly written as 1.4 instead of 1.1. The deviation is now added in section for 3.2.2 of MR V03	
Documentation provided by project participant	
MR V03	
VVB assessment	Date: 07-March-2024
PP has now corrected the typo error of the approved joint PD&MR and the deviation is now mentioned under section 3.2.2 of the monitoring report, further thoroughly crosschecked and found appropriate to the current project activity. The methodology's applicability, the baseline scenario's additionality or appropriateness, or the emission reduction estimates are unaffected by this deviation. Thus, CAR# 02 is closed.	

CAR ID	03	Section no.	4.1	Date: 21-February-2024
Description of CAR				
Under section 4.1 "Data and parameters available at validation" mentioned version number for Tool 30 is not inline with the JPD&MR. Corrective action sought.				
Project proponent response				Date: 23-February-2024
In section 4.1 tool 30 version number updated as per JPD & MR.				
Documentation provided by project participant				
MR V02				
VVB assessment				Date: 02-March-2024
PP has now updated the latest available version number of tool 30 under section 4.1 of the VCS monitoring report and made inline with the joint PD&MR. Thus, CAR# 03 is closed.				

CAR ID	04	Section no.	4.5	Date: 21-February-2024
Description of CAR				
Under section 5.4 of the monitoring report, value mentioned for Ex-ante estimated reductions/removals is not inline with the ER sheet. Corrective action sought.				
Project proponent response				Date: 23-February-2024
Ex ante value corrected in MR as per ER sheet.				
Documentation provided by project participant				
MR V02				
VVB assessment				Date: 02-March-2024

PP has now updated the section 5.4 of the revised monitoring report and value for Ex-ante estimated reductions/removals made inline with the emission reduction sheet.

Thus, CAR# 04 is closed.

Table 4. FAR from this verification

FAR ID	FAR 01	Section no.	Date: DD/MM/YYYY
Description of FAR			
NA			
Project proponent response			Date: DD/MM/YYYY
NA.			
Documentation provided by project participant			
NA.			
VVB assessment			Date: DD/MM/YYYY
NA.			

APPENDIX 5: COMPETENCY STATEMENTS

Validation Team Member: -

No	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Lead Auditor/ Technical Expert	OR	Takarkhede	Dr. Atul	TQC- Outsourced entity	Yes	Yes	Yes	Yes
2	Observer	OR	Jangid	Mr. Ravi	TQC- Outsourced entity	Yes	Yes	Yes	Yes
3	Observer	OR	Jain	Mr. Sarthak	TQC- Outsourced entity	Yes	Yes	Yes	Yes

Technical Reviewer and Approver of the Validation 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 (TR)	IR	Singh	Dr. N. Premjit	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Shorts CV of the Team:

- Dr. Atul Takarkhede** is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 18 years of experience in field of Environmental Auditing, consulting and accreditation. He is an expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management among others. Furthermore, he counts with solid experience on CDM-VCS-GS consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes. Dr. Atul Takarkhede is based in Nagpur, India.

- Mr. Ravi Jangid** holds (Master's Degree in Environmental Engineering, Bachelor's Degree in Civil Engineering). His research pursuits and expertise include working on water, wastewater, and industrial wastewater performance evaluation and optimization with MATLAB on WTP/STP/CETP. He also interned with the World Resource Institute (WRI) on the Clean air catalyst project, which includes a source apportionment assessment of Indore city and different regulatory studies on waste burning, transportation, eateries, brick kilns, and so on. He furthermore completed research-based training at CPCB, where he has undertaken water, wastewater, and SWM testing. In addition, he has attended conferences, training programs, webinars, and gained certification in areas such as SWM, water, wastewater testing, air pollution monitoring. He also had a review paper published in the journal listed in UGC care list. He has been with True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since 2023 and has been involved in supporting Audit teams for Validation/Verifications of Project Activities.
- Mr. Sarthak Jain**, has done Bachelor of Technology in Information Technology Engineering from Walchand Institute of Technology, Solapur, Maharashtra, India affiliated with Solapur University. Currently, He is working in True Quality Certifications Pvt. Ltd. and has been involved in supporting Audit teams for Verifications of Project Activities (Renewable and non-Renewable projects) under CDM/VCS/GS4GG/GCC programs. Mr. Sarthak Jain is based in Indore (Madhya Pradesh), India.
- Dr. N Premjit Singh** has a PhD in Mechanical Engineering (Thesis: Design and development of a square parabolic dish system with a concentrated photovoltaic (CPV) module for performance improvement) from the Indian Institute of Technology (IIT) Madras, Chennai, India, awarded in 2021. M.Tech in Energy Technology, Tezpur University, Napaam, India (2007), and B.Tech in Mechanical Engineering (2005), NERIST, Nirjuli, India. He has extensive experience of about 7 years with DOEs, including UNFCCC CDM and other carbon related schemes (e.g., VCS, GS, GCC), and 5 years + in research projects, renewable energy, and energy audits. In Applus+ since March 2023, he has been the Product Assurance Manager for CDM/VCS/GS4GG/GCC Department to ensure the quality of the performance of different assessments, coordinate the global team for technical reviews, and identify the training needs for the auditors and technical reviewers to improve the quality of reports. He holds experience as a Lead Auditor, Validator and Verifier for GHG mitigation projects and programmes of activities in Sectoral Scope 1.2 (Renewables) and 3.1. (Energy Demand) and is qualified as per Applus+ procedures as Lead Auditor, Validator, Verifier, Technical Expert for SS/TA 1.2. and Technical Reviewer. Dr. N Premjit Singh is based in Gurugram, India. Dr. N Premjit Singh participate as part of the Technical Review team.