



EASTERN DRC COOKSTOVE PROJECT- SOUTH KIVU



Document Prepared By

(By KBS Certification Services Ltd.)

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Summary:

‘AERA Group’ has appointed the verification body KBS Certification Services Ltd. to perform a verification of VCS Project Activity “Eastern DRC cookstove project-South Kivu” (hereafter “project activity”) for the period from 10-June-2020 to 31-December-2021 (both days included).

The project proponents ‘OBEN EAC S.A the project owner applied the VCS-approved Methodology: VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1. In addition, the Standard: Sampling and Surveys in CDM Project Activities and Programme of Activities version 9.0; Guidelines: Sampling and Surveys in CDM Project Activities and Programme of Activities version 4.0 are used; these documents include the requirements for sampling and surveys applied to clean development mechanism projects and programme of activities (PoA) and specifies the reliability requirements and describes appropriate sampling methods and what is expected to be provided in a sampling plan.

The verification consisted of the following three phases: i) a desk review of the Monitoring Report ii) Remote audit; iii) the resolution of outstanding issues and internal technical review followed by the issuance of the final verification report and opinion. During the verification process 03 CARs, 04 CLs

and 00 FAR were raised, all the CARs and CLs are closed now. The list of Clarification and Corrective Actions Requests (CL and CAR) is presented in this report.

KBS Certification Services Ltd. confirms that the project is implemented in accordance with the validated VCS-PD and the monitoring plan; and then, claimed emissions reductions are calculated without material misstatements.

KBS Certification Services. Ltd. has performed the verification of 'Eastern DRC cookstove project-South Kivu' based on all issues and criteria of VCS Standard version 4.4 and VCS Program Guide version 4.3 for VCS projects and on the criteria given to provide for consistent project operations, monitoring and reporting. Hence, KBS Certification Services. Ltd is in the opinion that the project correctly applies the baseline and monitoring methodology VMR0006: "Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1" and meets the relevant VCS requirements for the Methodology, Voluntary Carbon Standard requirements and the relevant host country criteria.

Therefore, KBS Certification Services. Ltd can certify that the emissions reductions from the "Eastern DRC cookstove project-South Kivu" project during the period 10-June-2020 to 31-December-2021 amount to 189,900 tCO₂e.

The verification is based on the VCS PD, monitoring report (MR), Emission reduction calculation spread sheet (ER sheet); additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the verification team by project proponent.

A risk-based approach has been followed to perform the verification of the project activity. In the course of verification 03 CARs, 04 CLs and 00 FAR have been raised. All the CARs and CLs have been closed out successfully.

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

As a result of the verification, the verification team confirms that:

- The project fulfils criteria of VCS Standard Version 4.4.
- The project is in line with all relevant VCS requirements.
- Relevant decisions, clarifications, and guidance from the CMP and the CDM Executive Board and VERRA;
- All information and references relevant to the project activity resulting in emission reductions;
- The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of VMR0006, version 1.1

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1 INTRODUCTION

1.1 Objective

KBS Certification Services. Ltd. has been contracted by, “AERA Group” to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘EASTERN DRC COOKSTOVE PROJECT-SOUTH KIVU’ (VCS ID2636) for the monitoring period 10-June-2020 to 31-December-2021. (Inclusive of both days), under the crediting period 10-June -2020 to 09-June-2027, in the initial monitoring report version 01 dated 20 October 2022, with regard to the relevant requirements of VCS Standard Version 4.4. The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

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

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring equipment) of the project are in place;
- Monitoring report and other supporting documents are complete.
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of monitoring report, VCS project description (VCS PD), including the monitored data, and other relevant documents made available to verifier and information collected through performing interviews during remote assessment of the project activity.

The project is assessed against the requirements of VCS standard version 4.4 and related rules and guidance. KBS has, based on the recommendations in the latest version of Verified Carbon standard, and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The aspects to be covered under the purview of verification are:

- Ensure that the project activity has been implemented and operated as per the VCS PD and that all physical features (technology, project equipment, and monitoring equipment) of the project are in place as per the documents provided by the client and during remote audit;
- Ensure that the monitoring report and other supporting documents provided are complete
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan.
- Evaluate the data recorded and stored are as per the monitoring methodology.

1.3 Level of Assurance

☒ Reasonable level of assurance

The verification is based on the VCS PD, MR, additional documents related to baseline and monitoring methodology, the subsequent background investigation, monitoring plan, follow-up interviews and supporting documents made available to the verification team by project proponent. The information in these documents is reviewed against the requirements of VCS Standard Version 4.4. KBS has employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the verification are described below:

- Criteria of VCS Version 4.4 (VCS Program guide Version 4.3 & VCS Standard Version 4.4)
- Criteria of approved methodology, VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1
- VCS Monitoring Report
- Monitoring Plan
- Background investigation and follow up interviews.
- Stakeholder feedback
- Project's compliance with other relevant rules, including the project country legislation and assurance to stakeholders of the quality..

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. A desk review is carried out to assess the following:

- Compliance with relevant law and regulations

- Stakeholder comments (If any)
- Technical specifications of improved cookstoves.
- Beneficiary agreements
- Commissioning Certificate
- Remote Audit (04 January 2023) for verification

The Verification team has checked all the above-mentioned details and confirms that all the information provided is accurate.

Through the remote interviews, host country rules and regulations related to project activity, Project description, technological measures, Implementation, Operation, Management of project activity and Training of personnel, Baseline and Monitoring plan, Stakeholder consultation etc. has been checked and found appropriate.

KBS applies the risk-based approach aimed at focusing on high-risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the findings were submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions.

Hence the above steps were followed for achieving the level of assurance in verification report. Based on the process and procedures conducted, KBS confirms that the information in the MR:

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements and the applied CDM methodology for information pertaining to GHG qualification, monitoring and reporting.

The verification work is carried out as per this requirement and the verification opinion is assured, provided the credibility of all above. Details are presented in the Verification statement in section 5 below.

1.4 Summary Description of the Project

The project activity aims to increase access of households and communities to improved cookstoves by disseminating high thermal efficiency and low greenhouse gas emitting cooking stoves known as Improved Cook Stoves (ICS) to the rural households in the eastern Democratic Republic of Congo (DRC), of the Sud-Kivu province, in Africa and will target primarily the regions covered by the diocese of Uvira (via community-based organization). The implementation of the project activity results in replacement of low efficiency and high greenhouse gas emitting stoves (three-stone fireplace or traditional charcoal cookstoves) in the households, thereby resulting in reduction of firewood consumption & consequent emissions from combustion. Overall objectives

through the implementation of the project are reduction of greenhouse gases, conservation of forests leading to climate change mitigation in a sustainable manner (reduction of biomass consumption and associated reduction in expenses to purchase wood or charcoal and reduction in time gathering firewood), creating job opportunities in the region as well as improved health conditions of ICS users due to improved indoor air quality along with drudgery reduction in everyday cooking.

At present the first project instance is implemented in Sud-Kivu, and since the project start date on 10 June 2020 (First ICS distribution) until 31/12/2021 (first monitoring period), 78,065 stoves have been distributed to end-users in Sud-Kivu province.

As confirmed through the remote interview and through the submitted supporting documents, the technology deployed under the project activity is thermally efficient (in compliance with the methodological requirements) and having an average lifespan of 8 years. The currently eligible types of cookstoves to be distributed include the “Jiko Matawi” stove, a Tanzanian-design ICS that is produced from moulded clay. “Jiko Matawi” stove has been tested for thermal efficiency of 32.1% as per water boiling test and certified by third party (CREEC test report dated 2019). The ICS distributed “Jiko Matawi” have a better efficiency than traditional charcoal pots and three stones fireplace. The efficiency test report provided to assessment team was reviewed and it was concluded that the efficiency test was conducted in accordance with the procedure stipulated in the applied methodology VMR0006, version 1.1/09/

The charcoal used in the project activity has been prepared from the non-renewable biomass (firewood) and this was confirmed during the remote assessment by the project verification team by interviewing the HHS, wherein the charcoal was procured from the local markets by the users, and this has been processed through the firewood. The non-renewable component of the charcoal was accounted in terms of fnrb multiplications in the baseline emissions.

The ICS are provided to households at a 50% subsidy to users (Stoves are sold at 5\$ while the total manufacturing and distribution cost of ICS is accounted as 10\$/stove) as a replacement for the traditional stove /16/. The individual households using ICS have signed an agreement with the PP to enter into contractual agreement with the beneficiaries by virtue of which, the end user confirms use of cook stove as well as transfer the VCU right to the Project Participant.

2 VERIFICATION PROCESS

The verification process was carried out in line with the requirements of VCS Version 4.4. In addition, the verification team followed the guidelines of Standard auditing techniques and KBS's Procedures were also applied during the verification. A risk-based approach was followed to carry out verification and access all the factors and concerns that relate to the issuance of emission reductions from a project activity.

They include:

- Identification of all the sources contributing to the project emissions and emission reductions.
- Authenticity of the provided data is checked.
- A risk-based analysis is carried out to ensure a clear and transparent assessment. The risks involved in this process are mainly with the informational flows and data recording.

KBS follows a risk-based verification approach, wherein a desk review of the project documentation is undertaken, which is followed by site inspection by the members of verification team. The verification protocol is filled by the verification team that is based on standard auditing practices and VCS requirements. The verification protocol provides transparent means to record the observations by the verification team members and the non-conformities, if any. The verification protocol is an internal document, and available on request.

2.1 Method and Criteria

The project activity applies approved VMR0006 version 1.1/09/, categorized under sectoral scope 3 “Energy Demand”. The verification consisted of the following phases:

- Completeness check and desk review of the Monitoring Report
- Interview with project representatives and issuance of findings.
- Resolution of findings followed by preparation of the final verification report and opinion

During the remote verification, a random sampling approach has been used by the verification team to verify the reported values of the monitored parameters as listed in the MR which are determined through sampling by PP.

Sampling approach during verification audit is conducted in accordance with “Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities, Version 04.0” and the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities, Version 09.0.

The verification team followed the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities” version 09 (Applicable to the monitoring of this group especially for taking samples out of the PP’s sample. Verification team had adopted the acceptance sampling approach to verify the sampling result of the PP for the applied verification period.

For the determination of DOE’s acceptance sample size, verification team assumed the following factors:

1. Acceptable quality level (AQL) - 0.5%
2. Unacceptable Quality Level (UQL) – 15%
3. Producer risk- 10%
4. Consumer risk- 20 %

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 activities and programme of activities” version 09.0/14/. From the above assumed factors, the verification team determined the minimum sample size (n) as 10 minimum samples for the project and acceptance number (c) as Zero as per the chosen AQL/UQL, Consumer/Producer risk. The verification team shared the samples with PP during remote audit process.

During remote audit/interviews, verification team interviewed sample household using the ICS system applying the random selection technique to cross check the data reported by PP. Verification team has checked the PP samples result with the remote interview and results, monitoring forms, technical details of the project technology/10/, households data base as per the ER sheet/2/ and found no discrepancies. The result of the VVB’s remote survey is given below:

Parameters	DOE Sample size (n)	No of PP's record beyond unacceptable level (C)	Accepted/ Rejected
Monitoring parameters as per MR (Mean and Proportion)	10 samples	0	Accepted

Number of PP's sampling monitoring records/data results beyond unacceptable level or found discrepant was 0. during the KBS verification remote audit. All the interviewed samples by verification team were showing similar result as reported by PP in its monitoring records. Remote audit results/observation is found to be in line with PP's surveys. . Further, the verification team reviewed all the primary monitoring records submitted to assess the consistency of information in MR and ER calculation spreadsheet and found the monitoring data to be correctly transcribed. Based on that, verification team concludes that sampling results and values presented by PP in the MR and spread sheet and results of survey are consistent with the remote audit and interview with the end users/PO/PP.

Duration of Verification:

Verification Contract	28-September-2021
Remote audit	04 January 2023
Draft Verification Report	24 February- 2023
Final Verification Report	24-May-2023

2.2 Document Review

A desk review is undertaken for the registered VCS PD, VCS MR, emission reduction calculation spread sheet, and supporting documents related to the project implementation, project design, monitoring and baseline were reviewed as per VCS version 4.4 requirements, involving but not limited to:

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

The list of documents reviewed is included in the section 'References.

2.3 Interviews

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects <https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24/03/2020 from “Andrew Beauchamp” has been referred as per which “The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.1). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit”.

VVB had shared NOV's form with VERRA on 2 December 2022 and again an updated form on 6 December 2022 wherein it has been conveyed to VERRA that due to the local unrest and security reasons at the project implementation site. Further, it was brought to the notice of VVB by PP that they had several comments from their partners, explaining a deterioration of the security situation in the project area and in the Eastern part of DRC in general. Although it may be possible to visit the city of Uvira, it will not be the case for the surrounding towns and villages, as the security risks are very high. In such prevalent condition, VVB did not want to take risk with the travel of its auditors as it considers health and safety a top priority and hence planned a remote site visit with an assured level of assurance. As the verification had to be conducted on an urgent level due to prior commitment of PP and PO, hence VVB went ahead and conducted a remote audit instead of the physical site visit, to confirm the verification requirements.

Although an online site visit was not performed, VVB ensured to reach a reasonable level of accuracy. during both the validation and first verification steps, VVB has conducted robust interviews and interaction with stakeholders using virtual zoon/WhatsApp video calls and did the inspection of the project implementation.

Findings : VVB has further raised an FAR in the vérification report to ensure a physical site visit to be compulsarily conducted during next subséquent verifcaiton period. (Refer to Appendix 2 below)

Hence, the VVB has used other standard auditing techniques for validation as referred to in VCS Rules/requirements, VCS Validation and Verification Manual version 3.2.

Validation team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of validation. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the VCS PD /1.2/, as well as all applicable country legal requirement and supportive evidences have been checked by the validation team.
- Validation team has performed Skype interview with PP in order to check implementation, ownership, technology, thermal testing procedure, sampling and monitoring procedures etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in VCS PD and supporting documents.

Details of interviews, topics covered and additional information are presented below:

Date:	04-January-2023 (Virtual call)		
Key points discussed:	Name of person, interviewed	Designation, Organization	KBS Team member
Project description, Project Implementation status , sampling, procedure to avoid double counting, monitoring plan implementation, Monitoring records, Interview with stakeholders	Jokhanan TOE	Project manager AERA Group	Technical Expert (TA-3.1): Mr. Tushar Chaudhari
	Alexandre Dunod	COO AERA Group	Team Leader/
	NDIZEYE Claver	Director OBEN E.A.C	Validator: Shilpa Swarnim
	KAPOMA Joseph	Supervisor OBEN E.A.C/Uvira Diocese	
	RWEMERA Pascal	OBEN E.A.C	

	• Onokoko kabangu lewis • Kikala mukinay yvonne • Tchimona ilunga elise gaudence • Tuombeane batuli bella • Mbomwangi anaclet pierre claver • Muzinga thoniôt japhet • Kikanda ne • Seke kambale djoli sabine • Ompeta mayara gedeon • Kilonda kasongo marie daniella	All 10 End Users	
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Details of end users interviewed during Remote assessment by verification Team:

	Name of end users	ID Number	baseline user
1	Onokoko kabangu lewis	OB-RDC016758	Charcoal
2	Kikala mukinay yvonne	OB-RDC021212	Charcoal
3	Tchimona ilunga elise gaudence	OB-RDC022976	Charcoal
4	Tuombeane batuli bella	OB-RDC059411	Charcoal
5	Mbomwangi anaclet pierre claver	OB-RDC064119	Charcoal
6	Muzinga thoniôt japhet	OB-RDC078076	Charcoal
7	Kikanda ne	OB-RDC016721	Firewood
8	Seke kambale djoli sabine	OB-RDC025808	Firewood
9	Ompeta mayara gedeon	OB-RDC078087	wood

10	Kilonda kasongo marie daniella	OB-RDC048044	wood
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2.4 Site Visits

KBS has not conducted site inspection for the verification process, remote interviews were carried out and have been detailed in section 2.3 above

During the remote verification, a random sampling approach has been used by the verification team to verify the reported values of the monitored parameters as listed in the MR which are determined through sampling by PP.

Sampling approach during verification audit is conducted in accordance with “Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities, Version 04.0” and the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities, Version 09.0.

The verification team followed the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities” version 09 (Applicable to the monitoring of this group) especially for taking samples out of the PP’s sample. Verification team had adopted the acceptance sampling approach to verify the sampling result of the PP for the applied verification period.

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high-risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

- the project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- the Voluntary Carbon Standard’s requirements have not been met, or
- there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

- Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR (Forward Action Request):

FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The monitoring report was revised addressing the CARs & CLs issued by KBS. After reviewing the revised MR; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final verification report and opinion.

The list of CARs/CLs raised, and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix 2 of this report. The revised MR with changes incorporated as per the issues raised were rechecked with the documentary evidence and found to be inline.

2.5.1 Forward Action Requests

No FAR was issued during the current verification, neither any FAR raised during the previous validation.

2.6 Eligibility for Validation Activities

N/A as the assignment is explicit the verification activity.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not seeking registration in whole or in part under any other GHG program outside this project activity within VERRA and this has been verified from the CDM projects webpage, GCC Projects webpage and GS projects webpage.

3.2 Methodology Deviations

This project did not apply any methodology deviations.

3.3 Project Description Deviations

This project did not apply any project description deviation during this monitoring period.

3.4 Grouped Project

N/A as the project is not registered as group project under VCS.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity is in operation stage as confirmed during interviews of the end users and the monitoring team. All the physical components and project boundary are in conformity with the description in registered VCS PD.

This project is implemented in Sud-Kivu, and since the project start date on 10 June 2020 (First ICS distribution) until 31/12/2021, 78,065 stoves have been distributed to end-users in Sud-Kivu province. The same has been verified with database spreadsheet under ER calculation sheet.

All the data recorded during stove registration process was captured via hard copy of registration card. The information collected is then transferred to a project database.

Based on the remote inspection and the reviewed project documentation like the technical specification, beneficiary agreements, monitoring database etc. the verification team confirms that the project was implemented and operated as described in the VCS PD. Further, the verification team confirms that-

- There is no material discrepancy between project implementation and the project description in the VCS PD.
- The monitoring plan is completely implemented and is suitable with actual monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters)
- The project has not participated or been rejected under any other GHG programs and further has not received or sought any other form of environmental credit since validation.

Ownership and other programs:

The project ownership is with OBEN EAC S.A., Project proponent (PP). During the registration of ICS, the participating household signs a declaration to transfer the ownership rights of the carbon assets generated from this project to the project proponent, the same has been confirmed from the sample beneficiary agreement submitted by the PP. Thus, emission reductions generated by project will be solely claimed by PP and PP has the right of use, which is acceptable.

Sustainable Development Contributions:

As confirmed during the remote audit, the project contribution towards sustainable development is established in line with the sustainable development indicators framed by the UN SDG and has the benefits such as reduction in indoor air pollution, reduction in time spent and distance travelled for fuel wood collection, conservation of forest by reducing rate of forest degradation /deforestation and thereby reducing GHG emissions from the environment. There are other economic benefits such as opportunities for local communities involved in monitoring, training of users, undertaking periodic maintenance and post life time replacement.

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
1)	1	Number of users that experience money savings thanks to the use of the ICS	Implemented activities to increase	77,739 end-users during the monitoring period	In total 77,739 end-users
2)	3	Number of users that experience less fumes thanks to the better combustion of the ICS	Implemented activities to increase	77,739 of end-users during the monitoring period	In total 77,739 end-users
3)	7	Number of Improved cookstoves distributed	Implemented activities to increase	78,065 end-users equipped with ICS	78,065 end-users equipped with ICS.
4)	8	Number of decent jobs created	Implemented activities to increase	20 jobs created	20 jobs created
5)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	189,900 tCO ₂ e	189,900 tCO ₂ e during the project lifetime
6)	15	Quantity of wood saved.	Implemented activities to increase	113,529 tonnes of wood	113,529 tonnes of wood during the crediting period

Management and operational system:

Verification team was able to verify that authorities and responsibilities for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 10-June-2020 – 31-December-2021 (Inclusive of both days).

The verification team has interviewed the personnel who are involved in the monitoring of the parameters that are used to determine the emission reductions of the VER project. It is confirmed based on the interviews that the team is competent enough to monitor the parameters as described in the monitoring plan.

As discussed above, the verification team concludes that the management and operational system of the project is implemented and operated well. Thus, it ensures the quality of data which is required in calculating the emission reductions.

Implementation status of the monitoring plan:

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. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

Therefore, from the document review and remote inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period.

4.2 Safeguards

4.2.1 No Net Harm

The project activity is utilization of Improved Cook stove for cooking in rural households and does not involve any negative impact. Assessment team confirms the same based on its local and sectoral expertise.

4.2.2 Local Stakeholder Consultation

During current monitoring period no complains raised by stakeholders, also no issues were identified in previous stakeholder meeting, which requires change in process or mitigation measures.

4.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team has reviewed the emission reduction (ER) spread sheet and checked all the formulae and verified them to be correct and in line with the monitoring plan of the VCS PD and the applied monitoring methodology.

The monitoring system and all applied procedures are in compliance with the monitoring plan contained in the registered VCS-PD and the applied methodology VMR0006 “Methodology for Installation of High Efficiency Firewood Cookstoves” Version 1.1, based on the information included in the final monitoring report, there are several procedures for data collecting depending on the methodology applicable for each step of the project. Organizational Structure has been provided in the MR along with the roles and responsibilities.

The verification team has checked the ex-ante parameters and data stated in MR and compared with relevant section of the validated VCS PD that whether all parameters fixed ex-ante for the crediting period have been applied correctly.

The Ex-ante parameters are as follows:

S. No.	Ex-ante Parameter and unit	Description	Value	Consistent with the respective VCS PD
1	$f_{NRB,y}$ (Percentage)	Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass	84.02%	The value is fixed ex-ante and considered at validation Therefore, the value has been fixed at the time of validation, subsequently applied for all the instances. The verification team has reviewed the f_{NRB} calculations and found them to be credible.
2	B_{old} (tons/year)	Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices	4.531 tonnes of firewood equivalent per household and per year	Source of data is the study conducted by the CIRAD for the city of Bukavu. The study highlights average number of persons per households, as well as average charcoal and firewood consumption per capita and per day. The value is fixed ex-ante and considered at the time of validation and validated by the validating VVB which is KBS itself.
3	η_p	Efficiency of the project stove at the start of project activity	0.321	This parameter is sourced from Manufacturer's specification based on Water boiling Test conducted and has been determined ex-ante during validation phase.
4	$NCV_{biomass}$ (TJ/tonne)	Net calorific value of the non-renewable woody biomass that is substituted	0.0156 (TJ/tonne)	Default value as per the methodology is applied which is in accordance with the requirements as verified by the verification team. The values were fixed at the time of validation. Hence accepted by the verification team.

5	EF _{wf,CO2}	CO2 emission factor for the use of wood fuel in baseline scenario	112 tCO ₂ /TJ	Default value in methodology. The values were fixed at the time of validation of validation. Hence accepted by the verification team.
6	EF _{wf,non CO2}	Non-CO2 emission factor for the use of wood fuel in baseline scenario	26.23 tCO ₂ /TJ	Default value in methodology. The values were fixed at the time of validation of validation. Hence accepted by the verification team.

Monitored Parameters (Ex-Post)

The parameters and sampling measures taken are detailed below:

Parameter	Description of Parameter	Verified Value	Sampling approach (outcome in brackets)	Verification Approach by VVB								
$N_{y,i,j}$	Number of project devices of type i and batch j operating during year y	<table><tr><td>Year</td><td>$N_{y,i,j}$</td></tr><tr><td>2020</td><td>10,383</td></tr><tr><td>2021</td><td>47,298</td></tr><tr><td>TOTAL</td><td>57,681</td></tr></table>	Year	$N_{y,i,j}$	2020	10,383	2021	47,298	TOTAL	57,681	Measured directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence precision according to the latest version of Standard for sampling and surveys for CDM project activities and programme of activities..	Verification team concluded that the monitoring parameter is monitored in line with the monitoring requirements. The parameter is monitored through the “Stove distribution database and survey records”. The database has been checked and found that the same is monitored by the by PP. Total sample sizes during this monitoring period has been identified as 110 households.
Year	$N_{y,i,j}$											
2020	10,383											
2021	47,298											
TOTAL	57,681											

			Interview with end user if required to verify that project stove is still in use (Yes/No)	For Batch of 2020- For the total population size of 17,919 , z value at 90% confidence and with maximum error for precision of 10% consideration is calculated to be 1.96. Similarly for batch of 2021- For the total population size of 60, 146 , z value at 90% confidence and with maximum error for precision of 10% consideration is calculated to be 1.96. VT found this This is inline with “Guideline: Sampling and surveys for CDM project activities and PoAs Verification team has verified the monitoring parameter through Stove distribution database and survey records, remote assessment and from the details given under the ER sheet and found consistent. The sampling approach
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				and the results of the sampling by VVB are explained in the section 2.1 of this report. .			
η_{old}	Efficiency of baseline stoves	16%		PP has used Methodology default value. Weighted average values regarding the type of stoves (0.1 for wood users and 0.2 for charcoal users). During the monitoring period, on the 78,065 households equipped, 48,882 are charcoal users and 29,183 are firewood users. The weighted average gives 16% as per emission reduction calculation sheet	The parameter “Efficiency of baseline stoves” is a monitoring parameter as per the registered VCS PD. As per the VCS PD, the source of data for the above parameter is “Methodology default value” and This parameter will be updated during the monitoring periods. Verification team has further checked the data through audit assessment interview, all the Efficiency test reports for ICS and the ER sheet. The data was found consistent. Based on local and sectoral expertise; verification team found the values in compliance with requirements.		
$H_{new,l,j}$	Efficiency of the project device	<table><tr><td>Year 2021</td><td>Efficiency</td></tr></table>	Year 2021	Efficiency		Project Stoves are tested	The parameter “Efficiency of the
Year 2021	Efficiency						

	of each model/vintage	<table><tr><td>Batch 2020</td><td>30.3%</td></tr><tr><td>Batch 2021</td><td>30.8%</td></tr></table>	Batch 2020	30.3%	Batch 2021	30.8%	using WBTs for thermal efficiency	project design I and batch j implemented as part of the project activity” (η_{new}) is a monitoring parameter as per the registered VCS PD. As per the VCS PD, the source of data for the above parameter is “representative sampling testing based on Water Boiling Tests” The monitoring of the parameter has been conducted following the VCS PD. Each vintage representation for the WBT test was verified by the VVB by reviewing the WBT results. The verification team determined the implementation and operation management system through the audit interview with the PP. During audit interview, verification team checked the procedures implemented for inclusion of project
		Batch 2020	30.3%					
		Batch 2021	30.8%					
		<table><tr><td>Year 2020</td><td>Efficiency</td></tr><tr><td>Batch 2020</td><td>30.7%</td></tr></table>	Year 2020	Efficiency	Batch 2020	30.7%		
		Year 2020	Efficiency					
		Batch 2020	30.7%					

				instances, roles and responsibilities, quality check etc. The verification team confirms that the implementation and operation of the project management system, including the record-keeping system, complies with the registered PD. Verification team has further checked the monitored data through audit assessment interview, all the Efficiency test reports for ICS and the ER sheet. The data was found consistent. Based on local and sectoral expertise; verification team found the test reports in compliance with WBT protocols.
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μ_y	Adjustment to account for any continued use of pre-project devices during the year y	<table><tr><td></td><td>$1-\mu_y$</td></tr><tr><td>Batch 2020</td><td>2.91%</td></tr><tr><td>Batch 2021</td><td>0.96%</td></tr></table>		$1-\mu_y$	Batch 2020	2.91%	Batch 2021	0.96%	Interview with end user and visual inspection to determine if a pre-project (replaced) stove is still being used in addition to project stove (Yes/No)	This parameter value is cross checked through the “sample survey records”. The database has been checked and found that the same is monitored by the CPA implementer and PP on at least biennial basis. The same was also confirmed during the remote audit. Verification team has checked the values of parameter in the ER sheet through sampling out of the samples selected by the PP through sample check of the Monitoring forms and remote interview check. The sampling approach and the results of the sampling by VVB are explained in the section 2.1 of this report. Hence the verification team was able to conclude that this was monitored correctly.
	$1-\mu_y$									
Batch 2020	2.91%									
Batch 2021	0.96%									

Life Span	The operating lifetime of the project device	8 years		Value for this parameter is sourced from the Manufacturer's specification	The value has been verified by assessment of submitted Manufacturer's specification of the stove which reflects the life span of 8 years.
Date of commissioning of batch j	To establish the date of commissioning, the Project Participant may opt to group the devices in "batches" and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch	Batch	Date of commissioning	The date of commissioning of each batch of stove distributed is sourced from the Project database	Verification team has assessed the project database to confirm the commissioning dates of the batches.
		2020	31/12/2020		
		2021	31/12/2021		

Emission reduction (ER)

The methodology does not calculate baseline and project emissions separately. The steps taken and the equations and parameters applied in the VCS-PD to calculate the project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).

Quantification of baseline emissions:

According to methodology VMR0006, version 1.1, emission reductions shall be calculated as:

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

Where;

i = Indices for the situation where more than one type of project device is introduced to replace the pre-project devices

j = Indices for the situation where there is more than one batch of project device

ER_y = Emission reductions during year y in tCO_{2e}

ER_{y,i,j} = Emission reductions by project device of type i and batch j during year y in tCO_{2e} LE_y = Leakage emissions in the year y

Since the grouped project activity involves the deployment of improved cookstove, the following equation is applicable as per VMR0006 version 1.1:

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

B_{y,savings,i,j}: Quantity of woody biomass that is saved in tonnes per cookstove device of type i and batch j during year y.

f_{NRB,y}: Fraction of woody biomass that can be established as non-renewable biomass (fNRB)

NCV_{biomass}: Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is „air-dried“)

EF_{projected fossil fuel}: Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.

N_{y,i,j}: Number of project devices of type i and batch j operating during year y

μ_y: Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 and 8 (fraction). Use 1.0 in other cases

B_{y,savings,i,j} is calculated using the following formula in accordance with equation 6 of the approved methodology:

Parameter	Value	Source
$B_{old,p}$	0.697 tonne	CIRAD report. Values is found conservative and in line with methodology requirements
$N_{d,HH}$	1	Ex-ante estimation
$N_{p,HH}$	6.5	CIRAD report.
μy_{2020}	2.91%	Ex-post calculation.
μy_{2021}	0.96%	Ex-post calculation.
$B_{old,HH}$	4.531 tonnes	Calculated as per methodology
$B_{old,HH \text{ adjusted, 2020}}$	4.4 tonnes	Calculated as per methodology
$B_{old,HH \text{ adjusted, 2021}}$	4.49 tonnes	Calculated as per methodology

Project Emissions:

As per the methodology the PEy is considered zero.

Hence, PEy= 0 is acceptable to the verification team.

Leakage:

Leakage shall be considered as default 0.95 in accordance with Section 5.4 of the approved methodology

Summary of ERs calculated by PP is demonstrated in below table and verified as per the ER spread sheet submitted:

Year	Baseline emissions removals (tCO ₂ e)	or	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net emission reductions removals (tCO ₂ e)	GHG or
10 June 2020-31 December 2020	20,665		0	0	20,665	
01 January 2021-31 December 2021	169,235		0	0	169,235	
Total	189,900		0	0	189,900	

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant lack of evidence and missing data were detected during remote audit discussion and inspection. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures.

The verification team can confirm that sufficient evidence is available for the whole monitoring period and the same is verifiable and that the data collection system meets the requirements of the monitoring plan and the applied methodology according to the assessment carried out on site and in the document review.

Verification team confirms that the quality of evidence to determine the GHG reductions and removals produced was found satisfactory. The detailed information flow with the roles and responsibilities of the individuals and the monitoring system have been provided in the VCS- MR.

It was also verified through remote audit inspection that the team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy.

4.6 Non-Permanence Risk Analysis

As the project activity is a non-AFOLU project activity no risk related to non-permanence has been identified for the project activity.

5 VERIFICATION OPINION

KBS Certification Services. Ltd. has been contracted by, 'AERA Group' to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported *from* 'Eastern DRC cookstove project-South Kivu' (VCS ID 2636) for the monitoring period 10-June-2020 to 31-Dec-2021 (Inclusive of both days), under the crediting period 10-June -2020 to 09-June-2027, in the initial monitoring report version 01 dated 20 October 2022 and in the final monitoring report version 03 dated 03-May-2023, with regard to the relevant requirements of VCS Standard Version 4.4.

The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the PP. The development and maintenance of records and reporting procedures are in accordance with the final Monitoring Report version 3 dated 03-May-2023.

As a result of the verification, the verification team confirms that:

- All operations of the project are implemented and installed as planned and described in the project description.
 - The monitoring system is in place and functional.
 - The installed equipment essential for generating emission reductions runs reliably.
 - The GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.
-
- Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

Verification period: From 10-June-2020 to 31-Dec-2021 (Inclusive of both days)

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

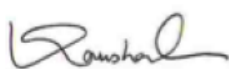
Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net emission reductions or removals (tCO ₂ e)	GHG
10 June 2020-31 December 2020	20,665	0	0	20,665	
01 January 2021-31 December 2021	169,235	0	0	169,235	
Total	189,900	0	0	189,900	

Comparison of ex-ante emission reductions/removals to the ex-post emission reduction/removals:

<u>Ex-ante emissions reductions /removals</u>	<u>Achieved emissions reductions /removals</u>	<u>Percent difference</u>	<u>Justification for the difference</u>
320,104	189,900	-41%	Less ICS 12-month full use equivalent distributed during this monitoring period as compared to ex-ante scenario

Location: Faridabad

Date: 03/08/2023



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services. Ltd.

APPENDIX 1: REFERENCES

Ref	Document
/01/	Monitoring Report titled: 1. EASTERN DRC COOKSTOVE PROJECT-SOUTH KIVU Version 01 dated 20 October 2022 2. EASTERN DRC COOKSTOVE PROJECT-SOUTH KIVU Version 02 dated 03 March 2023 3. EASTERN DRC COOKSTOVE PROJECT-SOUTH KIVU Version 03 dated 03 May 2023
/02/	ER sheet corresponding to: 1. MR version 01 2. MR version 03
/03/	Sales and Distribution Database
/05/	Sample Household Survey Questionnaire
/06/	Efficiency (32.1%) test report of ICS as per water boiling test according to CREEC Test report dated July 2019)
/07/	- beneficiary agreement: Tripartite agreement between PP, distributor and end beneficiary/ICS user - Monitoring/Survey and installation reports. - Technical specifications of the ICS Matawa stoves, as per manufacturer specification - Photographs of the listed beneficiaries interviewed. - Contracts of employment generated
/08/	Project Description for the EASTERN DRC COOKSTOVE PROJECT-SOUTH KIVU

/09/	• Ex-ante ER sheets • Registered VCS PD • Validation Report • Fnrb spreadsheet (as part of registered documents)
/10/	• Stoves Technical Specifications and WBT Test Reports • Life Time Certificate by the stove manufacturer • Operation & Maintenance Records
/11/	Training Records and Training Material for Monitoring Personnel
/12/	Training Records of training imparted to the Households/stove users.
/13/	Distribution and data sharing agreement between the PP(OBEN SAS) and CDPE (Distributor of ICS) dated 26-5-2017
/14/	• Methodology VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1 • Standard: Sampling and surveys for CDM project activities and programme of activities, Version 9 • Guideline: Sampling and surveys for CDM project activities and programme of activities, Version 04 • VCS Standard, Version 4.4 • VCS MR Template, Version 4.2
/15/	• Historical research papers for Baseline Assumptions- • 1. Safe Access To Fuel and Energy (SAFE) Democratic Republic of Congo by WFP dated Novemeber 2017 • 2. Democratic Republic of the Congo fuels and technologies used for cooking by scenario, 2018-2030 • 3. CIRAD report by UNDP dated June 2020 • 4. https://trackingsdg7.esmap.org/country/democratic-republic-congo

APPENDIX 2: FINDINGS

Summary of findings	CL	CAR	FAR
	4	3	0

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

No FAR was raised during Validation .

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

Table 2. CL from this validation/verification

CL ID	01	Section no.	MR sec 1.1	Date: 23/02/2023
Description of CL				
- Under section 1.1 of the Monitoring report it is stated that “Only one project instance is actually implemented in Sud-Kivu, and since the project start date on 10 June 2020 (First ICS distribution) 78 ,065 stoves have been distributed to end-users in Sud-Kivu province”. However in registered PD it has been claimed that “ From the project start date, 107,8221 stoves have been distributed to end-users in Sud-Kivu province”. PP to clarify and confirm the total distributed ICS with supporting evidence. - Also as this is not registered as a grouped project , hence PP to clarify the term used “Only one project instance is actually implemented in Sud-Kivu”, clarifying if it intends to implement further instances.				

Project participant response	Date: 03/03/2023
- VVB to kindly note that the number of ICS “107,822” stated in the VCS-PD correspond to the number of cookstoves distributed from 10/06/2020 to 30 May 2022, while the number of 78,065 correspond only to the number of stoves distributed during this monitoring period, from 10/06/2020 to 31/12/2021, hence the difference. Only the number of ICS distributed during this monitoring period are stated in the VCS-MR - PP does not intend to implement other instances. The term “Only one project instance”, have been revised in the project document.	
Documentation provided by project participant	
Revised Monitoring report	
DOE assessment	Date: 16/03/2023
I 1. PP has now submitted the revised Monitoring Report, ver 02, and it has been assessed by the verification Team. PP has now confirmed that “<i>This project is implemented in Sud-Kivu, and since the project start date on 10/06/2020 until 31/12/2021 (first monitoring period), 78,065 stoves have been distributed to end-users in Sud-Kivu province</i>”. The same has been verified with database spreadsheet under ER calculation sheet. Hence this part of CL1 is CLOSED 2. PP has attuned the statement which read as “project first instance”. The same has been verified by the Verification team in the revised Monitoring report version 2. Hence this part of CL1 is CLOSED. Thus, CL 1 is now CLOSED	

CL ID	02	Section no.	Cover page of the Monitoring report/Excel worksheet	Date: 23/02/2023
Description of CL				
1. The monitoring period as reported in the cover page of the Monitoring report is 10 June 2020 to 31 December 2021. However, in the submitted worksheet, under tab “Monitoring surveys” the monitoring data is reflecting from 31 Dec 2021 to 5 Jan 2022. PP to clarify the monitored data reported and provide full database of the participating households considered for ER calculation. 2. In the section 5.4 of the MR, the baseline and emission reductions reported in the table for the year 2021 is inconsistent with the ER calculation sheet.				

Project participant response	Date: 03/03/2023
1) VVB to kindly note that monitoring surveys have been between 30/12/2021 and 05/01/2022 for this monitoring period. The fulls participant along with the monitored data are available in the monitoring survey TAB of the ER calculation sheet. 2) The Section 5.4 have been revised to update the emission reductions.	
Documentation provided by project participant	
Revised MR Revised ER Monitoring surveys	
DOE assessment	Date: 16/03/2023
1. Verification team is in accordance with PP's response and accepts the explanation provided. The verification team has also reviewed the ER sheet which includes the names of participants along with the monitored data, in the monitoring survey TAB and found it to be satisfactory. Hence this part of CL is CLOSED. 2. PP has submitted the revised Monitoring Report, ver 02 and section 5.4 has been updated. This has been assessed by the verification Team. Hence this part of is CLOSED. Thus CL 2 is now CLOSED.	

CL ID	03	Section no.	MR- sec 4.2	Date: 23/02/2023
Description of CL				
In the registered PD for the project activity, the parameter $f_{NRB,y}$ (Fraction of woody biomass saved by the project activity during year that can be established as non-renewable biomass) has been has been determined ex-ante during project validation phase and stated that <i>"This parameter shall remain fixed for the monitoring periods."</i> The calculated value is reported as 98.40%. However for the present verification period the value of $f_{NRB,y}$ has been reported as 84.02%. PP to clarify and confirm the reason for recalculation and revision.				

Project participant response	Date: 03/03/2023
VVB to kindly note that the former value of 98.40% in the VCS-PD have been revised during validation stage and the value have been updated to 84.02% which was the final value in the last version of the VCS-PD as available on the registry. Hence the value used for this monitoring period.	
Documentation provided by project participant	
N/A	
DOE assessment	Date: 16/03/2023
It has been reconfirmed by Verification Team that post VERRA review the fNRB calculation was corrected and now the revised fNRB value comes to 84.02% which ahs been adequately applied by PP. The verification team is in accordance with PP's response and accepts the explanation provided	
Thus CL 3 is now CLOSED	

CL ID	04	Section no.	Remote audit	Date: 23/02/2023
Description of CL				
1. During the stakeholder interview ,it was observed for one of the stakeholder that the household uses the baseline cookstove also sometimes as the current ICS is not able to meet the cooking demand. In this perspective, PP to clarify how it accounts for any continued use of pre-project devices during the year for the all the monitored households. 2. Furthermore, during end user interview, ICS no. OB.RDC081111 owned by NKULIMBA KAMBALE Baudouin, informed that in baseline they are using JIKO Charcoal in baseline. Thus, PP is requested to clarify how the Jiko charcoal stove efficiency is determined and provide supportive for the same. How the baseline and efficiency (nold) determined for other baseline stoves is also valid for this Jiko charcoal stove.				
Project participant response	Date: 03/03/2023			

1) The continued usage of baseline stoves is a monitored parameter. Therefore on the sample of household monitored, households are asked if they still use their baseline stoves as well as the baseline stove usage frequency. As VVB can see in the monitoring tab, 10 household declared that they were using their baseline stoves and the Uy factor have been assessed based on their usage frequency. 2) VVB to kindly note the following: the project intends only to replace inefficient stoves not ICS. During the audit, M. Kambale declared that he was formerly using the Jiko stove, however after discussion with him, it appears that this was a misunderstanding. The OBEN stove is also called Jiko type as stated in section 1.11 of the VCS-PD. Mr Kambale didn't understand the question hence his answer. PP confirms after clarifying the question with M Kambale, that he was using a coal pot before the introduction of OBEN ICS. VVB can request if needed a second call with M Kambale to confirm this.	
Documentation provided by project participant	
Monitoring survey data in ER sheet	
DOE assessment	Date: 17/03/2023
1. The verification team is in accordance with PP's response and accepts the explanation provided. Further, VVB has cross-checked the statement against the monitoring survey data available in ER sheet provided and confirmed the same. 2. The verification team is in accordance with PP's response and accepts the explanation provided. Thus CL 4 is now CLOSED	

Table 3. CAR from this validation/verification

CAR ID	01	Section no.	MR cover page	Date: 23/02/2023
Description of CAR				

In the submitted Monitoring report- version 01, below mentioned inconsistencies have been observed-

1. PP has not applied the latest available VCS Standard Version 4.4.
2. PP has not used the latest version of the MR template (as applicable from 21/12/2022), following the template instructions contained therein.
3. PP to complete all sections using Arial or Franklin Gothic Book 10.5 point, black, regular (non-italic) font, as per the requirement of the template.

Project participant response
Date: 03/03/2023

- 1) Latest VCS standard is now applied.
- 2) Latest version of Monitoring report template is now applied
- 3) Sections have been revised and completed with Franklin Gothic Book 10.5

Documentation provided by project participant

Revised Monitoring report

DOE assessment
Date: 15/03/2023

Verification Team has assessed the revised Monitoring report provided and shall conform the following:

1. PP has now submitted the revised Monitoring report which is in line with the latest available VCS Standard Version 4.4.
2. The revised Monitoring report provided to the Verification team is now based on the latest available report template.
3. The font size and format have been attuned in the latest Monitoring report version 02.

Hence CAR 1 is now CLOSED.

CAR ID

02

Section no.

MR-

Date: 23/02/2023

Description of CAR

In the present Monitoring period, for SDG 8- Decent Work and Economic Growth, 20 new job creations have been reported. PP to confirm the same with supportive evidence.

Project participant response	Date: 03/03/2023
The supporting evidence of the job creation is now provided to VVB	
Documentation provided by project participant	
<i>List of employees and working contract</i>	
DOE assessment	Date: 15/03/2023
PP has submitted the documents for assessment of 20 new job creations and it has been assessed by Team and found satisfactory. Hence, This CAR 2 is CLOSED	

CAR ID	03	Section no.	MR/ Excelsheet	Date: 23/02/2023
Description of CAR				

In the submitted MR, under section 4.2, the value reported for $N_{y,i,j}$ -Number of project devices of type i and age a that are operating in year is as below-

Stoves 2020	17,919
Stoves 2021	78,065

However

in the excel worksheet under tab “Database” the number of ICS reported

is as-

Stoves 2020	17,919
Stoves 2021	60,146
TOTAL	78,065

Also the number of ICS reported in worksheet under tab “VCUs calculation VMR0006” is not consistent with number reflected above. PP to report the total ICS implemented in consistent manner throughout the report and submit revised ER sheet. PP shall also submit Purchase receipt of the ICS for the sampled stakeholders interviewed by verification Team.

Project participant response

Date: 03/03/2023

VVB to kindly note that the number in the MR was referring to the total number of ICS by 2021 in row 2 while the number in ER sheet was referring to the number of cookstoves in the Bath 2021 only. Regarding the difference between the number on the MR and the tab “VCU calculation”, this is due to the fact that under this tab, the number is the number of cookstoves 12-month full equivalent use while in the MR, it refers to the total number of ICS. However, for the sake of consistency the number of cookstoves full use equivalent is now reported in the monitoring report.

VVB to kindly note that the purchases receipts have already been shared. The end-users’ contracts work also as purchase receipt and warranty for the households. The purchase price is included in the contract, which is only given to to beneficiaries, once the cookstove is purchased

Documentation provided by project participant

DOE assessment		Date: 16/03/2023
PP has submitted the attuned Monitoring report and in section 4.2 now the number of project devices of type i and age a that are operating in year 2020 and 2021 is now correctly mentioned in MR and is consistent with the information in ER sheet.		
Year	Ny,i,j	
2020	10,383	
2021	47,298	
TOTAL	57,681	

Hence CAR 3 is now CLOSED.

Table 4. FAR from this verification

1 FAR has been raised for the present verification.

FAR ID	01	Section no.	Date: 01/08/2023
Description of FAR			
The VVB conducting next subsequent verification shall ensure an onsite assessment is done as per the requirement and also in accordance with PRR observations raised by VERRA.			
Project participant response			Date: DD/MM/YYYY
Documentation provided by project participant			
DOE assessment			
Date: DD/MM/YYYY			

APPENDIX 3: COMPETENCE OF TEAM MEMBERS

Personnel Name:		Tushar Chaudhari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal		
Approved by	Manager Competency & Training		
Approval date:	02/09/2020		

Personnel Name:		Shilpa Swarnim	
Qualified to work as:			
Team Leader(trainee)	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
SS: 01: Energy industries	TA 1.2: Energy generation from renewable energy sources		
SS 14: Afforestation and reforestation	TA 14.1 Afforestation and reforestation		
Approved by (Manager C & T)	Shikha Sharma		

Approval date:	06/09/2021
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Personnel Name:	Sanjay Kandari		
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Gagandeep Kakkar		
Approval date:	03/11/2015		

Personnel Name:	Mansi Vashishtha		
Qualified to work as:			
Team Leader	☐	Technical Expert	☐
Validator/Verifier (trainee)	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
-	-		
Approved by (Manager C & T)	Shikha Sharma		
Approval date:	11/01/2023		