

GS4GG Verification (Performance) Certification Report



Certification Pvt. Ltd.

VKU Certification Pvt. Ltd.

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Project Title

**GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA
01**

Registry Project ID: GS12944

Monitoring Period: **22/08/2023 – 31/08/2024**

For

OYU-Green Private Limited

VKU Project Reference No.

VKU.VER.06.24 GS 12943

Executive Summary:

A) Basic information										
Project Title	GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01									
GS4GG Project ID:	GS 12943 (PoA-DD Id) GS 12944 (VPA-DD Id)									
Date of Project Design Certification	22/08/2025									
Last Date of Annual Report	Not Applicable									
VKU Project Reference No.	VKU.JVV.06.24 GS 12943									
Sectoral scope	03: Energy Demand									
Methodology/ies applied	Reduced Emission from Cooking and Heating – Technology and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0									
Technical Area (TA)	3.1									
Host country	The Federal Republic of Nigeria									
Location	The project activity is being implemented in Nigeria, particularly in states of Enugu and Gombe.									
Project Representative	OYU Green Private Limited									
Project Developer/Investor	OYU Green Private Limited									
GS4GG Activity Requirements	Community Activity Services									
GS4GG Certified Product	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A									
Selected Sustainable Development Goals and GS4GG SDG Impact Statement	<table><tr><td>SDG 3</td><td>97.66%</td></tr><tr><td>SDG 5</td><td>95.31%</td></tr><tr><td>SDG 8</td><td>20 (number of jobs created)</td></tr><tr><td>SDG 13</td><td>255,755 VERs</td></tr></table>		SDG 3	97.66%	SDG 5	95.31%	SDG 8	20 (number of jobs created)	SDG 13	255,755 VERs
	SDG 3	97.66%								
	SDG 5	95.31%								
	SDG 8	20 (number of jobs created)								
SDG 13	255,755 VERs									
Scale of Project Activity	Large-scale									
B) Verification										
Start date of crediting period	22/08/2023									
End date of crediting period	21/08/2028									
Type and Length of Crediting period	5 years, Renewable Twice									
Monitoring Period	22/08/2023 – 31/08/2024 ¹ (both dates included)									
C) Monitoring report	Version	Date								

¹ The application of retroactive crediting in accordance with **Paragraph 5.1.37 of the Gold Standard Principles and Requirements**, which allows retroactive performance certification for up to two years prior to the Project Design Certification date. Accordingly, emission reductions were considered from **22/08/2023**, resulting in a shorter eligible Monitoring period duration i.e., from 22/08/2023 to 31/08/2024 for VERs Claims.

Initial	1.0	30/11/2024
Final	7.0	23/02/2026
D) Performance Certification report	Version	Date
Initial	1.0	25/06/2025
Final	3.0	23/02/2026
E) Verification Team		
Team Leader ²	Barun Kumar	
Technical Expert (TA 3.1)	Barun Kumar	
Validator/Verifier	Anil Dhankar	
Validator/Verifier- Trainee	Megha Modi	
Project Trainee	Swati Vats	
Local Expert (Nigeria)	Temitope Akinbinu	
F) Approvals		
Technical Reviewer ³	Sunil Kathuria	
Technical Expert (TA 3.1)	Sunil Kathuria	
G) Final opinion		
VKU Certification has performed the 1st verification of the GS4GG project “GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” and GS4GG Ref. Number 12944. The verification includes confirmation about the implementation of the monitoring plan of the PoA-DD and VPA-DD and the application of the monitoring methodology as per Reduced Emission from Cooking and Heating – Technology and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0. VKU Certification confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The emission reductions from the GS4GG project activity ID 12944 “GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” in Nigeria during the period 22/08/2023 – 31/08/2024 (including both days) amount to 255,755 tCO₂e.		
VVB Opinion	Conclusion	
Positive	☒ (Mark Tick if applicable)	
Negative	☐ (Mark Tick if applicable)	
H) Authorization		
Director	Dr. Vikas Kumar Aharwal	
Date	27/02/2026	
I) Distribution		
No public distribution without written confirmation from client.		
J) Verification Status		
Findings closed	Yes	
Draft report	Yes	
Final report	Yes	

² Team Leader and Validator/Verifier is an approved GS Auditor for VKU.

³ Technical Reviewer is an approved GS Auditor for VKU.

Abbreviations

CAR	Corrective Action Request
CDM	Clean development mechanism
CERs	Certified Emission Reductions
CL	Clarification Request
EB	Executive Board
ERs	Emission Reductions
FAR	Forward Action Request
FVR	Final Verification Report
GHG	Greenhouse Gas(es)
GS4GG VVS	Gold Standard Validation and Verification Standard
IPCC	Intergovernmental Panel on Climate Change
MR	Monitoring Report
PDD	Project Design Document
RCP	Renewable of Crediting Period
RMP	Revised Monitoring Plan
VERs	Verified Emission Reductions
VVB	Validation and Verification Body
VVS	Validation and Verification Standard



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1. INTRODUCTION

1.1 Project Summary

The VPA entitled “**GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01**” (**GS ID 12944**) aims to replace inefficient traditional stoves with energy efficient improved cookstoves (ICS) and conventional wood fuel with wood pellets. The proposed project is located in multiple districts of host country Nigeria.

This project is designed to transform the lives of rural and tribal communities in Nigeria by addressing critical health, economic, and environmental challenges. Through the provision and promotion of improved cookstoves and fuel change, the initiative aims to reduce indoor air pollution, improve respiratory health, and enhance the overall well-being of the targeted populations. Furthermore, the project is expected to generate local employment opportunities and promote environmental stewardship by increasing awareness of climate change and the advantages of sustainable cooking practices.

Specifically, the project seeks to replace inefficient and harmful traditional cookstoves with modern, energy-efficient alternatives and fuel wood with wood pellets. By improving cooking efficiency and reducing indoor air pollution, the initiative will contribute to improved health outcomes, enhanced quality of life, and better economic prospects for rural and tribal households. Additionally, it will support environmental sustainability through the mitigation of greenhouse gas emissions.

The project is being implemented in Nigeria, with a focus on various districts within Enugu and Gombe States. In the absence of this intervention, the target households continue to rely heavily on inefficient and polluting traditional cookstoves, which consume non-renewable biomass fuels to meet daily cooking needs.

The project is implemented by Implementing partner, while the OYU Green is the Project Developer (PD), and is eligible under the GS4GG methodology: Reduced Emission from Cooking and Heating – Technology and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0/11/. OYU Green Pvt Ltd is acting as the Coordinating/Managing Entity (CME) for the project. The boundary of the project is set within the host country Nigeria. The baseline scenario of the project is identified as usage of traditional three stone fire, fuel with non-renewable fuelwood to meet the daily cooking needs. The introduction of fuel-efficient stoves with fuel change is expected to offer multiple benefit to Nigerian communities prevalent in the project locations. This includes reduced health risks, reduced time spent on fuel collection and increased employment opportunities through stove distribution and project operation and maintenance.

The project is designed to create a significant positive impact across the Sustainable Development Goals (SDGs), with a particular focus on SDG 13 (Climate Action), SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth). The initiative benefits



not only active participants but also passive beneficiaries, including children, the elderly, and the broader community.

The VPA (GS 12944) is applying for combined validation and verification, with the first verification conducted under performance review in accordance with the GS4GG requirements. The project has a lifespan of 15 years, with VPA start date of 01/08/2023 and crediting period start date 22/08/2023, determined in accordance with Section 5.4.1 of the Programme of Activity Requirements and Procedures v3.0.

The current monitoring period is from 22/08/2023 to 31/08/2024, with a total emission reduction of 255,755 tCO₂e **VERs are claimed only for the period from 22/08/2023 to 31/08/2024**, in accordance with the application of **retroactive performance certification** as stipulated under **Paragraph 5.1.37 of the Gold Standard Principles and Requirements**, which allows retroactive crediting for up to **two years prior to the Project Design Certification date**.

Accordingly, any emission reductions generated prior to **22/08/2023** were excluded from the VER claim.

1.2 Objective

OYU Green Private Limited has contracted VKU Certification Private Limited (AT) to conduct the verification and certification of emission reductions reported for the GS4GG project activity 12944 “GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” in Nigeria for the period 22/08/2023 – 31/08/2024 (both dates included). This report contains the findings of the verification process and a certification statement for the verified emission reductions.

The verification is the periodic independent review and ex post determination by VKU Certification of the monitored reductions in GHG emissions that have occurred as a result of the registered GS4GG project activity during a defined monitoring period. Certification is the written assurance by VKU Certification that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification is to verify and certify emission reductions reported for the “GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” for the period 22/08/2023 – 31/08/2024 (both dates included) as per GS4GG validation and verification standard v2.0 para 1.1, 9.1 and sub para 9.1.1/06/.

1.3 Scope and Criteria

The scope of this verification was the independent objective review and ex-post determination of the monitored reductions in GHG emissions from the “GS 12943 VPA-1 OYU– Building Sustainable

Nigerian Communities VPA 01 ”. The verification of this project is based on the proposed GS4GG PoA-DD version 6.2, dated: 23/02/2026/17/ and VPA-DD version 8.0., dated 23/02/2026/16/ and monitoring report version 7.0, dated: 23/02/2026/18/ along with supporting documents submitted by the project representative to the AT. The documents thus submitted to the AT were reviewed against the following guidance and protocol:

1. GS4GG validation and verification standard v2.0 para 1.2/06/
2. GS4GG validation and verification standard v2.0 para 9.7.2 and 17.2.8 for POA and VPA(S) /06/
3. GS4GG principles rules and requirements v2.1 /01/
4. GS4GG Community Service Activity Requirements v1.2 /08/
5. GS4GG Safeguarding Principles & Requirements v2.1 /02/
6. GS4GG Gender Equality Requirements & Guidelines v2.0 /09/
7. GS4GG Stakeholder Consultation & Engagement Requirements v2.1 /03/
8. GS4GG Programme of Activity Requirements and Procedures v3.0 /04/
9. GS4GG Methodology- Reduced Emissions from cooking and heating- Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC) v4.0 /11/
10. GS4GG Requirements and guidelines: Usage rate monitoring v2.0 /12/
11. GS4GG GHG Emissions reduction & sequestration product requirements v3.1 /10/
12. GS4GG Monitoring Report Template Guide v1.1/14/
13. CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities v04.0 /13/
14. CDM Standard: Sampling and surveys for CDM project activities and programmes of activities v09.0 /13/
15. CDM Tool 30- Calculation of the fraction of non- renewable biomass v04.0 /13/

The steps involved are as follows:

- To assess the project’s compliance with other relevant rules including the host country Nigeria legislation.
- To confirm that the monitoring system is implemented and fully functional to generate verified carbon units (VERs) without any double counting.

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement & is sufficiently supported by evidence.
- To verify that reported GHG emission data is sufficiently supported by evidence
- The verification considers both quantitative and qualitative information on emission reductions.
- The verification process ensures that the reported emission reductions are comprehensive and accurate in order to obtain certification.
- The verification also considers the monitoring of sustainable parameters

The verification method and criteria encompassed several phases, including

1. Desk Review of GS4GG PoA-DD version 6.1 dated: 09/01/2026/17/ and VPA-DD version 8.0 dated: 23/02/2026/16/, and supporting documents listed in section 04 of this report, which is provided by the Project Representative to assessment team.
2. Acceptance sampling
3. Remote Interview and interviews with stakeholders
4. Reporting, calculation checks, QA/QC and resolution of findings
5. Drafting of verification report
6. Independent technical review of project documentation
7. Issuance of the final verification report
8. Submission of the request for issuance, as appropriate

Outstanding issues are resolved, leading to the issuance of the final verification report. It is important to note that the verification process does not involve providing any consultancy to the project Developers. However, requests for clarifications and corrective actions may have contributed to improvements in the monitoring processes.

1.4 Level of Assurance and Application of Materiality

All the revisions of verification report before being submitted to the client are subjected to an independent internal technical review to confirm that all verification activities have been completed according to the pertinent VKU's procedure, with a Reasonable level of assurance, as per the GS4GG

validation and verification standard v2.0/06/ and GS4GG Principles and Requirements v2.1/01/ and other background documents listed in section 04 of this report.

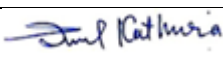
VVB applies the general requirements, consideration of materiality in planning verification and for conducting verification is as per the GS4GG validation and verification standard v2.0/06/, para 9.6. For the identification of materiality threshold VVB referred para 9.6.3 of validation verification standard v2.0/06/ and apply to the total emission reduction actually achieved by the VPA. As per the GS4GG validation verification standard v2.0 section 9.6/06/, the level of assurance of the verification report falls under reasonable assurance engagements with respect to material errors, omissions, and misrepresentations.

Table 01.

Application of Materiality Threshold as per the GS4GG VVS v2.0 para 9.6.3	Materiality threshold value (tCO ₂ e)	Reported ERs (tCO ₂ e)		Justification (If any deviation)
		In Initial MR	In Final MR	
2%	5122.18	2,58,880	255,755	The Validation and Verification Body (VVB) identified that the Coordinating/Managing Entity (CME) had not applied the correct formulas in calculating the achieved Emission Reductions (ERs). Upon notifying the CME of the discrepancy, the necessary corrections were made in the ER Calculation Sheet. Following the revision using the correct methodological formulae, the total Emission Reductions were recalculated, resulting in a change in the final ER amount. The updated ER values have now been cross-verified by the VVB and are considered accurate and compliant with the applied methodology.

1.5 Information of VVB

Table 02. VVB Information

Name of the VVB	VKU Certification Private Limited
GS accreditation expiry date	20-June-2026
Is the VVB accredited for the applicable sectoral scope?	Yes
Name, position of the approver of the verification report	Sunil Kathuria
Signature	
Name, position of the authorized signatory for issuance of the verification report	Dr. Vikas Kumar Aharwal
Signature (Final version only)	VIKAS KUMAR AHARWAL Digitally signed by VIKAS KUMAR AHARWAL Date: 2026.02.27 16:30:13 +05'30'

1.6 Sustainable Development Contributions

Table 03: Sustainable Development Contributions for verification

Sustainable Development Goals Targeted	SDG Impacts	Estimated Annual Average	Units
13 Climate Action (Mandatory)	Emission Reductions	255,755	GS-VERs
3 Good Health and Well being	Reduced incidence of disease caused by air pollutants	97.66%	End users in % perceiving improved health conditions
5. Gender Equality	Women empowerment and gender equality	95.31%	Percentage End users confirming time saving
8. Decent Work and Economic Growth	Increased employment opportunities	20	Number of jobs created

2. METHODOLOGY

VKU Certification assessed and determined whether the implementation and operation of the project activity, and the steps taken to report emission reductions comply with the GS4GG criteria and relevant guidance provided by the GS4GG impact registry.

The assessment involved a desk review of relevant documentation as well as Remote inspection. The personnel employed and their roles in this assessment is mentioned below;

Verification Team member(s)

S.No.	Full Name (Gender)	Role(s)	Type of Resource	Type of Activity(ies) carried out
1.	Barun Kumar (Male)	Team Leader	Internal Resource	DR, RSI, PI, VA and FVR ⁴
2.	Anil Dhankar (Male)	Validator/Verifier	Internal Resource	DR, RSI, PI, VA and FVR
3.	Megha Modi (Female)	Validator/Verifier Trainee	Internal Resource	DR, RSI, PI, VA and DVR
4.	Swati Vats (Female)	Project Trainee	Internal Resource	DR, RSI
5.	Temitope Akinbinu (Male)	Local Expert (Nigeria)	Internal Resource	DR, RSI, PI

Technical Reviewer(s) and approver(s) of the verification report

S.No.	Full Name (Gender)	Role(s)	Type of Resource	Type of Activity(ies) carried out
1.	Sunil Kathuria (Male)	Technical Reviewer	External Resource	Independent Technical Review

The competence statement of verification team members is included under Section 7 of this report.

Verification milestones:

Monitoring report submission:	30/11/2024
Remote assessment and Interview:	13/02/2025 - 15/02/2025
Draft Verification Report	25/06/2025
Final Verification Report	23/02/2026

VKU Certification followed a rule based verification approach, wherein, the contract review is undertaken as per valid/effective version of GS4GG accreditation Standard. Once the contract is agreed for verification, the monitoring report of the project activity submitted to VVB for further process. Key steps are described in Section 2.1 to 2.4 of this report.

⁴ RSI: Remote Site Inspection, DR: Desk Review, PI: Personnel Interview, VA: Verification Assessment, DVR: Draft Verification Report and FVR: Final Verification Report

The project activity falls under category “Community Service Activity Requirements”/08/ hence sampling methods were employed by the assessment team and during remote audit for this project at site for the verification of GHG emission reductions generated by the project.

- The GHG emission reductions are based on the approved Baseline and monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)/11/
- Scope 03 – Energy Demand (TA 3.1)
- Project type: It involves distribution and sustained use of efficient biomass or clean cookstoves that reduce fuel consumption and greenhouse gas emissions.

Tools used for GHG Calculations are as follows as per registered PDD:

- Tool 30 Calculation of the fraction of non-renewable biomass Version 02.0/13/

Keeping in line with ISO (14064-3; 2019, clause 06 & 14065-2020, clause 09)/15/ Standard guidelines assessment team has framed down the process for completing the verification and has followed the same throughout the execution of audit of the said project (VPA) GS 12944.

The verification consisted of the following phases.

- Document Review:** Relevant documents, such as the Monitoring report, Previous verification reports, monitoring plan, methodology, GS4GG PDD and QA/QC procedures are thoroughly reviewed.
- Planning:** The assessment team plans the GHG-programme and starts with a desk review.
- Strategic Analysis:** Assessment team performed strategic analysis to understand the activities and complexity of the project, and to determine the nature and extent of the verification activities. The results of the strategic analysis shall be used in the risk assessment.
- Risk Assessment;** Assessment team performed risk assessment of the GHG statement to identify the risk of a material misstatement or nonconformity with the criteria, as per para 9.7.3 (a) and as per para 7.9.2 (e) of the GS4GG VVS V2.0/06/. The same was documented in a different VKU internal document where the type of risks were identified and then evaluated.
- Evidence Gathering Activities;** Using risk-based approach assessment team prepared evidence gathering activities, to collect sufficient and appropriate evidence upon which the conclusion shall be based. It will also determine whether the GHG statement conforms to the criteria, taking into account the principles of the standards or GHG programme that apply to the GHG statement.
- Evidence Gathering Plan;** The evidence-gathering plan is prepared based on the results of the VKU’s Assessment Team’s risk assessment. It was designed to lower the verification risk to an acceptable level. The evidence-gathering plan thus specifies the type and extent of evidence-gathering activities & Plan.
- Audit Plan:** An audit plan is prepared, including all sub-elements required for an integrated verification process aligned with the contract, scope, objectives, level of assurance and materiality.
- Client Confirmation and Approval:** The remote audit plan is sent to the client for review and confirmation/approval via email.
- Remote Audit Assessment:** This includes interviews and evaluation of the actual project scenario.

- j. Resolution of Discrepancies:** Any non-conformities identified during the assessment are addressed and resolved.
- k. Independent Review:** A technical reviewer provides an independent assessment.
- l. Completeness Check:** Assessment for Quality Check and Quality Assurance of the final documents.
- m. Final Verification:** After completeness checks, the verification report and certification are issued. The following sections outline each step in more detail

2.1 Desk Review or Document Review

VKU Certification conducted a desk review or document as under;

During the document review, VKU has applied standard auditing techniques to assess the quality of information provided. The verification was performed primarily based on the review of monitoring report (MR) and emission reduction (ER) calculations spreadsheet is received from PoA-DD and VPA DD and assessed along with the monitoring reports as part of the verification. In addition, the GS4GG PoA-DD/17/ and VPA-DD/16/ was also reviewed, for the baseline estimations and the monitoring plan.

As per section 9.3 and clause 9.3.2 of the GS4GG Validation and Verification standard version 2.0/06/ the Document review involves:

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, 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 complete list of documents reviewed is included under Section 4.

2.2 Site Visits⁵ (Remote)

The project ‘GS 12943 VPA-1 OYU - Building Sustainable Nigerian Communities VPA 01’ (GS 12944) is undergoing a combined design certification and performance review in accordance with Section 5.1.53 of the Principles & Requirements Version 2.1/01/. The VPA is being implemented in Nigeria, where security conditions have restricted the inspection of many samples. A deviation was sought by the Project Developer due to the ongoing protests and crisis situation in Nigeria, which restricted physical access to project locations. Validation team confirm that the remote site visit has been conducted in accordance with the approved deviation granted by the Gold Standard registry.

⁵ The word (Site Visits) is a part of VKU Verification report template.

In line with Section p.2.1 of the Gold Standard Rule Update – Applicability of Minimum Site Visit Requirements by VVB, and as per the decision outlined in the approved deviation, the exemption to conduct a remote site visit was granted on grounds of force majeure for the current monitoring period only. This exemption shall not be considered as a precedent for subsequent monitoring periods.

As required, a detailed risk assessment for conducting the remote verification has been carried out in accordance with Annex 1: Risk Assessment Guidelines as outlined in the Site Visit and Remote Audit Requirements and Procedures – Version 2.0/05/. This risk assessment has been included as part of the Validation Report, ensuring alignment with Gold Standard procedures and maintaining the integrity of the verification process. The remote audit integrates both the validation and verification processes, as the CME and VVB have combined the design certification with the first verification and performance review. Accordingly, the VVB conducted the remote audit from 13-February-2025 to 15-February-2025.

The objective of the Remote Audit is to:

- Confirm the baseline of the project activity.
- Confirm the implementation and operation of the project activity.
- Review the data flow for generating, aggregating and reporting the monitoring parameters.
- Confirm the applicability of the applied methodology.
- Confirm the SDG goals/ Sustainable monitoring parameter as per the VPA-DD/16/.
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported SDGs under project activity.

VKU Certification Pvt. Ltd. has conducted remote audit from 13-February-2025 to 15-February-2025 and same has been recorded and stored for validation of this voluntary project activity (VPA) ‘OYU – Building Sustainable Nigerian Communities’ (GS 12943) following “Remote audit techniques” mentioned in Clause 2.C of the GS4GG Site Visit and Remote Audit Requirements and Procedures/05/ and Applicability of minimum site visit requirement by VVB.

The details of activities performed during remote audit, site location, date and involved team members are mentioned below:

Table 02: Details of activities performed during remote audit, site location, date and involved team members are mentioned below:

Duration of Remote Audit: 13-February-2025 to 15-February-2025				
S.No.	Activity Performed on-site	Site Location	Date	Team Member
1.	• Introduction, scope, objective, Type, scale, boundary and ownership of project activity.	Nigeria	13-February-2025 to 15-February-2025	Team Leader- Barun Kumar

	• Additionality assessment and implementation of applicable methodologies. • An assessment of the estimated implementation and operation of the GS4GG project activity as per the VPA-DD/16/. • A review of information flows for generating, aggregating and reporting of the monitoring parameters, • A cross-check between information provided in the VPA-DD/16/ and data from other sources. • A check of the monitoring performance, and observations of monitoring practices against the requirements of the VPA-DD /16/ and the applied methodology “Methodology for Reduced Emission from Cooking and Heating – Technology and Practices to Displace Decentralized Thermal Energy Consumption Version 04.0/11/. • A review of calculations and estimations made in determining the GHG data. • Operational lifetime of the Voluntary of activity (VPA), Start date of the Voluntary (VPA), Crediting period.			Validator/Verifier- Anil Dhankar Validator Verifier Trainee-Megha Modi Project Trainee- Swati Vats Local Expert- Temitope Akinbinu
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	- Grievance Redressal Mechanism (ongoing communication procedure with relevant local stakeholder) - Interview of relevant Local Stakeholders - Discussion of the audit findings to the client and agreement on the issues raised and agreement on timelines.			
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The assessment team conducted remote interviews to evaluate the information provided in the VPA-DD/16/ and the local stakeholder consultation report /31/. During the desk review, relevant records related to the project's design, implementation, and operation were examined. Additionally, remote audit interviews were carried out with stakeholders/59/ and relevant project personnel.

Sampling Plan by PD:

The VVB has assessed the Project Developer's (PD's) sampling approach applied for the monitoring surveys, including the usage survey and Kitchen Performance Test (KPT), in accordance with the requirements of TPDDTEC v4.0, the Gold Standard sampling guidelines, and relevant CDM sampling standards.

The PD initially estimated the sample size using a stratified sampling approach based on CDM guidance. However, the PD identified that the resulting sample size did not ensure adequate representation across all ICS model types, particularly for stove categories with lower distribution volumes (e.g. T500). To address this limitation, the PD adopted a simple random sampling approach proportionate to the total number of ICS distributed for each model type, as permitted under the Gold Standard sampling guidance.

The revised sample size (128 households) was cross-checked by the VVB against both:

- CDM-based stratified sampling calculations, and
- Gold Standard-derived sampling requirements.

The VVB confirms that the revised and applied sample size exceeds the minimum statistically required sample size under CDM guidance and provides sufficient representation for all ICS model types, thereby improving the robustness and conservativeness of monitored parameters such as fuel consumption, stove usage, and stove stacking behaviour.

The VVB further verified that the sampling procedure, random selection method, and QA/QC measures are clearly documented in Section D.4 (Implementation of Sampling Plan) of the Monitoring Report and have been consistently applied across all surveys.

Based on the above assessment, the VVB concludes that the PD's sampling approach is methodologically sound, adequately justified, and compliant with TPDDTEC v4.0 and Gold Standard monitoring requirements.

Sampling Plan by VVB:

Since this is a combined validation and verification of a (VPA) Voluntary large scale project activity which involves implementation of 122,222 improved cookstoves across different locations in Host Country Nigeria. So, the VVB need to validate the baseline (Pre-Project) scenario and project (Post project) scenario of the project activity. To achieve this, the VVB visited 10 samples for baseline validation and 10 samples for verification. The project activity is a community service activity which involves distribution of ICS throughout the project area thereby replacing traditional cooking devices. The population is homogeneous in nature i.e., common technology with similar operating characteristics but dispersed i.e., distribution of ICS is spread across different districts of Host Country: Nigeria. Since the characteristics of the population (for example quantity of biomass consumed) are more similar due to distribution is carried out in a same state. Therefore, a simple random sampling technique is used to calculate the samples. Samples were drawn by using the random number generator. The assessment team performed acceptance sampling based on the sampling guidance and picked 10 random ICS samples (Each household received 01 Improved cookstove) using randomiser that is representative of the sampling frame i.e., cookstoves distributed across states of Nigeria.

Justification for the sample Size:

As per para 39 of "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 9.0," *A DOE may select a different sample size than the one indicated in paragraph 32, either by choosing a different value for the consumer risk and producer risk (e.g. 20% for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:*

- a) The estimated volume of annual emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 tCO₂e.*
- b) The security conditions in the project region prevents inspection of many samples (e.g., conflict zones); or*
- c) The project activity or the PoA is in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified.*

In case of the current validation assessment,

the PoA & VPA is implemented in host country Nigeria, where the security conditions prevent the inspection of many samples. However, a deviation has been sought by the PD due to ongoing protests and crisis situation in Nigeria around the project areas. Hence, an exemption has been granted to conduct the remote site visit for the combined validation and verification in line with p2.1 of RULE UPDATE- Applicability of minimum site visit requirements by VVB.

To mitigate the risks associated with remote site visit, as per para 39 and sub para (b) of CDM Standard (Sampling and surveys for CDM project activities and programmes of activities Version 09.0)/13/, VVB select a different sample size than the one indicated in paragraph 32 of CDM Standard, by choosing a different value for the consumer risk and producer risk when applying acceptance sampling or by using another approach. Hence, Sample size(n)=10 with acceptance number (c) as 0. Wherein, Producer risk is 10% and Consumer risk is 20%. AQL= 1% and UQL=15%. Sample size = 10 which is the number of serial numbers of cookstove distributed in each household that were validated, verified and interviewed by the VVB during onsite assessment. In all other cases not covered in the above three points, para 39 of the guidance i.e., producer/consumer risk of not more than 10% will be applied to arrive at the sample size.

Sample size and acceptance number based on AQL, UQL, and producer and consumer risks as per Sampling and Survey Standard v09.0

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

Sample size from monitoring survey to cover the scope of verification.

The number of samples for each type of ICS as follows:

PC100 = 03

U100 = 04

T100 = 02

T500 = 01

Interviews:

As this is a combined validation and verification activity, the list of interviewed individuals is provided in this section.. During the interviews, the validation team took necessary measures to ensure that the selection of stakeholders and interview process remained unbiased and free

The main focus objective was to engage with relevant stakeholders in the host country, Nigeria, particularly individuals with knowledge of the project's design and implementation. Additionally, cross-checking was conducted between the information provided by different interviewees, including verifying sources and other interviews, to ensure that no relevant information was omitted.

Following clause 7.16.6e of GS4GG Validation andVerification Standard: Version 2.0/06/, VKU assessment team has taken oral consent from all the interviewees present during remote audit conducted on 13-February-2025 to 15-February-2025 to disclose their names and designation/affiliation in the final validation report of this project activity 'OYU– Building Sustainable Nigerian Communities VPA 1' (GS 12943) and none of them have any objection over this hence, there is no perceived or potential conflict of interest.

As this is a combined validation and verification activity, the list of interviewed individuals is provided in this section. The list includes the names and general information of the interviewees, with their oral consent obtained during the remote audit. During the interviews, the validation team took necessary measures to ensure that the selection of stakeholders and interview process remained unbiased and free from undue influence by the Project Developer or its representatives.

All the interviews/59/ conducted during remote audit for validation of this Programme of activity (PoA) as recorded in VKU.F46W. Attendance Sheet for Audit_VKU.JVV.06.24.GS_12943/52/ is listed below:

Table 03: Personnel Interview and Focussed Discussion with Project Developer's Team

S.N o.	Interviewee			Date	Subject	Team Member
	Last Name (Gender)	First Name	Affiliation			
1	NA (Male)	Usman	Project Supervisor	13-February-2025 to 15-February-2025	- Type, scale and boundary - Applicability of methodology - Operation and maintenance Procedures, including quality control, identification of VPAs and inclusion of VPAs within the PoA. - Monitoring of SDG & Monitoring practices following onsite. - The ongoing communication procedure and the address of their grievance mechanism	Team Leader- Barun Kumar Validator Verifier -Anil Dhankar Validator Verifier Trainee- Megha Modi Project Trainee- Swati Vats Local Expert- Temitope Akinbinu
1	Usman (Female)	Hadiya	Project manager (Gombe)			
2	Essey (Male)	Okey	CEO of Powerhouse			
3	NA (Male)	Satyam	Project Officer			
4	Singh (Female)	Prachi	Senior Program manager			
5	Kulshreshtra (Male)	Sidhant	Program Manager			

					followed by the project representative. - Frequency of training conducted for monitoring personnel. - Organization structure of the operating team at site.	
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Details of Personnel Interview/Focussed Group Discussion with end users/beneficiaries

Table 04: Personnel Interview and Focused Discussion with Project Device Users

S.No.	Name	Stove ID & Type	District	Interviewed by	Topic of Discussion
1	Asanet Jonathan (Male)	GB000710452 PC100	KUMO WEST	Team Leader- Barun Kumar Validator-Verifier- Anil Dhankar Validator-Verifier Trainee- Megha Modi Project Trainee- Swati Vats Local Expert- Temitope Akinbinu	Household Details: Discussed the family size, name of the end-user or stakeholder, relationship with stove owner (if different), device ID, and confirmation of sales/installation records. Location & Stove Model Info: Recorded the village or neighbourhood, device type/model/size, and date of installation or purchase. Stove Usage Patterns: Explored whether the ICS is actively used, how many improved stoves are in use in the household, and whether the baseline stove is still used. If yes, asked for specific reasons (e.g., stove failure, faster cooking, ease of use). Daily Cooking Behaviour: Identified the number of meals cooked daily (breakfast, lunch, dinner) and time taken for meal preparation on both baseline and ICS. Compared daily
2	Gidado Adamu (Male)	GB000736338 PC100	GARKO		
3	M Aminu (Female)	GB627757695 U100	YALMALTU/ DEBA		
4	Patience Mathew (Male)	GB000719883 PC100	KASHERE		
5	Onyechi Nnaka (Female)	EN000684452 T100	Abakpa Ii		
6	Komo Kano (Female)	GB623983948 T100	Kanawa / Wajari		
7	Ukhasha Ibrahim (Female)	GB623962910 T500	Hinna		

8	Ashia Usman (Female)	GB624007670 U100	Nono / Kunwal / W. Birdeka		cooking durations to assess time savings.
9	Ardo Haruna (Female)	GB627786567 U100	SHONGOM		Fuel Usage & Sources: Investigated the type and quantity of fuel used per meal, whether wood is purchased or collected, and how far users travel to obtain it. Compared frequency of collection with old vs. new stove. Stove Maintenance & Support Awareness: Asked about any breakdowns or repairs, and if the user knows how to contact the Project Developer (PD) or other support channels for replacement or complaints. Cooking Conditions: Assessed whether cooking takes place indoors or outdoors, typical dishes cooked (rice, beans, meat, etc.), and seasonal or contextual variations in stove usage. Health & Environmental Benefits: Gathered user feedback on reduction in smoke, respiratory wellness, eye irritation, and comfort while cooking. Asked about changes in household cleanliness and ash management practices. Economic Impact: Inquired whether reduced fuel usage translates into monetary savings, especially for households that buy wood. Documented perceived financial benefits. Awareness & Participation: Discussed whether any
10	Mamud Abubakar (Male)	GB627784199 U100	YALMALTU/ DEBA		



					training on ICS use was provided, what it included, and if the household has ever participated in a monitoring or performance survey. User Satisfaction & Social Diffusion: Captured user opinions about the ICS, overall satisfaction, willingness to recommend the stove to neighbours, and any additional comments or concerns expressed. Economic Impact: Inquired whether reduced fuel usage translates into monetary savings, especially for households that buy wood. Documented perceived financial benefits. Awareness & Participation: Discussed whether any training on ICS use was provided, what it included, and if the household has ever participated in a monitoring or performance survey. User Satisfaction & Social Diffusion: Captured user opinions about the ICS,
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					overall satisfaction, willingness to recommend the stove to neighbours, and any additional comments or concerns expressed.
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Table 05: Personnel Interview and Focused Discussion with Baseline Users

S.No.	Name & Gender	District	Interviewed by	Topic of Discussion
1	Mabel Ezugwu (Female)	Abakpa Ii	Team Leader- Barun Kumar Validator-Verifier- Anil Dhankar Validator-Verifier Trainee- Megha Modi Project Trainee- Swati Vats Local Expert- Temitope Akinbinu	1. Household Details - What is the total number of family members in the household? - What is the name of the primary cook or end-user? - Are you the owner of the household? If not, what is your relationship with the owner? 2. Location & Stove Type Info - In which village/locality do you reside? - What type of stove(s) do you currently use for cooking (e.g., three-stone fire, mud stove, traditional metal stove)? - How long have you been using this stove?
2	Abubakar Babayo (Female)	GARKO		
3	Daniel Rakiya (Female)	YALMALTU/DEBA		
4	Ayuba Tari (Female)	GARKO		
5	Sani Jawabi (Female)	SHONGOM		
6	Aishatu Muhammad Bello (Female)	Gombe		
7	Usman Abdullahi (Male)	KASHERE		
8	Blessing Ebenyi (Female)	Abakpa Ii		
9	Hauwa Abba (male)	Gombe		



10	Hindatu (Female)	Kumo		3. Stove Usage Patterns • How often do you use your current stove? • Do you use more than one type of stove regularly? If yes, please specify. • What are the main reasons you continue using this stove (e.g., affordability, tradition, convenience)? 4. Daily Cooking Behaviour • How many meals are typically cooked in your household daily (breakfast, lunch, dinner)? • How much time does it take to cook meals on your current stove? • Are there any seasonal variations in cooking frequency or duration? 5. Fuel Usage & Sources • What type of fuel do you use most often (e.g., wood, cow dung, charcoal)? • How much fuel do you use daily (in kg or bundles)? • Do you collect or purchase your cooking fuel?
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				• If collected, how far do you travel and how often? 6. Stove Maintenance & Repair Practices • Have you ever had to repair or replace your current stove? If so, how frequently? • Who helps you if your stove is damaged (e.g., self-repair, local artisan)? 7. Cooking Conditions • Where do you usually cook—indoors, outdoors, or in a separate kitchen? • What are the common meals you prepare (e.g., rice, dal, vegetables, chapati)? • Do your cooking habits change with the seasons (e.g., monsoon or winter)? 8. Health & Environmental Impacts • Do you experience smoke during cooking? If yes, how severe is it? • Have you or your family members faced any health issues such as coughing, eye
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				irritation, or breathing problems related to cooking smoke? • How do you manage ashes or soot after cooking? 9. Economic Aspects • If you purchase fuel, how much do you spend per week/month? • Has the cost of fuel changed over the years? • Do you think the stove you currently use is economical? 10. Awareness & Willingness to Change • Have you heard of improved cookstoves (ICS) or cleaner cooking technologies before? • Would you be willing to switch to a new stove if it saves time or fuel? • What would you expect from a better cooking solution? 11. Social & Behavioural Aspects • Do you know of any households that use an improved cookstove?
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				• If yes, what have you heard about their experience? • Would you consider recommending a better stove if you had a good experience?
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Table No 06: Personnel Interview and Focused Discussion with Local Stakeholders

S. No.	Name	Gender		Topic	Date	Location
1.	Salaha	Female	Baseline Household	• Are you willing to get ICS.	13-February-2025 to 15-February-2025	Nigeria
2.	Anthony Leku	Male	Extra Household	• How much time they spent on collecting fuel for cooking		
3.	Rabi Ibrahim	Female	Extra Household	• For how long are they using ICS		
4.	Amarachi Uba	Female	Extra Household	• Members in Family • If they are having any trouble regarding the usage of ICS		

The VVB remotely inspected the selected household samples and reviewed the relevant records, including project database, carbon transfer agreements, Installation details, Manufacture/Implementation specifications and the Monitoring Plan to validate the project. As this is a combined validation and verification activity, the VVB adopts a risk-based approach and considers the following risk factors:

S. No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the potential risk		Assessment of the records/information/interview with personnel to check controls/mitigation measures
		Risk level	Potential actions causing risk	

1.	Monitoring parameter	High	Monitoring not done as per the GS VPA-DD	To mitigate the risk associated with the project claims, a thorough review of the monitoring plan in GS GS VPA-DD/16/, in alignment with GS VVS & minimum onsite visit requirements, will be conducted. This review will ensure that the claims are consistent and compliant with the established GS guidelines as stated in GS Validation-Verification standard version 2.0/06/ and adopted methodology for the project i.e., Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)/11/, Due to the thorough assessment of the systems in place through extensive interviews, documentation review the Assessment Team ensured that the risk due to non-compliance of monitoring is reduced within the uncertainties of the sampling guideline and methodology. Furthermore, to verify the plausibility of the monitoring parameters, project-specific evidence related to the host country Nigeria was cross-checked. This included interviews with relevant stakeholders such as end-users and beneficiaries, who can provide valuable insights and feedback on the project's effectiveness. Additionally, the Verification team has conducted interviews with the end-users/site personnels which confirmed that the monitoring procedures were implemented according to the registered monitoring plan By employing these rigorous review processes and verification activities, the project can address
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				and mitigate any potential risks and ensure the accuracy and reliability of the reported data and claims.
2.	Project design: Information on project design without adequate controls related to data, evidences (project/sector related)	High	Project design incorrectly described thus leading to incorrect delineation of the baseline scenario, causal change, threats to the project	To mitigate the associated risks, a comprehensive review of the project claims stated in the PoA-DD/17/ & GS VPA-DD/16/ were conducted. This review helped in assessing the claims against GS4GG requirements (community service/08/, GS4GG VVS/06/ etc) to ensure compliance and accuracy. The Assessment Team has performed a detailed assessment of baseline delineation as per the requirements of methodology and GS VPA-DD/16/ in the latter part of this report. Furthermore, background documents such as the monitoring survey report which includes country-specific non-renewable biomass (f_{NRB}) studies, were cross-checked with project-specific evidence from the host country/region. This process helped verify and validate the claims made in the project documentation. Additionally, interviews with relevant stakeholders conducted to gather insights and perspectives from those involved in or impacted by the project. These interviews help provided valuable information to further assess the validity of the claims and ensure a comprehensive understanding of the project's performance. Regarding leakage, the default value of 0.95, as outlined in the specified methodology will be considered. This default value accounts for any potential leakage

				and ensures accurate calculations and assessments. By undertaking these measures, the project can effectively mitigate risks, enhance transparency, and ensure the reliability and credibility of the reported claims.
3.	Accuracy of the monitoring survey	High	Inadequately delineated monitoring plan may lead non-compliance	To mitigate the risk associated with the accuracy of the monitoring plan, several measures were taken. These include: 1. Reviewing the monitoring survey report and the GS PoA-DD /16/ & VPA-DD /17/. This review will assess the alignment of the monitoring plan with the reported data and claims, ensuring consistency and accuracy. 2. Ensuring compliance with GS4GG requirements. The monitoring plan was evaluated to ensure it meets the standards and guidelines set by GS4GG. 3. Assessing the sampling tool applied. The appropriateness and effectiveness of the sampling methodology used in the monitoring plan was examined to ensure reliable and representative data collection. 4. Conducting remote interviews with the Project Developer (PD), their associates, and end-users. These interviews provided an opportunity to verify the feasibility and appropriateness of the monitoring plan. Feedback from stakeholders involved in the project helped validate the accuracy of the data collected

				and the effectiveness of the monitoring procedures. By implementing these measures, the project can mitigate the risk associated with the accuracy of the monitoring plan and ensure that the reported data and claims are reliable and consistent with the established guidelines and requirements.
4.	Competence of personnel involved in conducting monitoring surveys like	Medium	Interview of the personnel involved and check the training records conducting such monitoring.	To mitigate the risk associated with monitoring surveys, the following steps were taken: 1. Reviewing the training records of the personnel responsible for conducting the surveys. This review ensured that the individuals involved in the monitoring process have received appropriate training and possess the necessary skills and knowledge to carry out accurate and reliable surveys. 2. Following the defined monitoring responsibilities. The roles and responsibilities of the monitoring team be clearly defined and adhered to throughout the survey process. This includes ensuring that all required data is collected, recorded, and analysed in a consistent and systematic manner. 3. Verifying the training records during interviews with relevant stakeholders. By conducting interviews, the validity of the training records was confirmed, and any discrepancies or concerns can be addressed.

				By conducting a thorough review of the training records and verifying them through interviews, the project can mitigate the risk associated with monitoring surveys. This approach ensures that trained personnel are involved in the survey process and that they follow the established monitoring responsibilities, thereby enhancing the reliability and accuracy of the collected data.
5	Sampling	High	The major risk associated with sampling in a large-scale cookstove project is the potential for sampling bias, where the selected sample does not accurately represent the entire population. This can lead to incorrect conclusions about the project's performance.	Measurement Errors: Errors in measuring emissions reductions from cookstoves can lead to inaccurate results. This risk can be mitigated by ensuring that the validation and verification body (VVB) uses calibrated equipment and follows standardized measurement procedures. Data Accuracy: Inaccurate data collection or reporting can impact the credibility of emission reductions. The VVB can mitigate this risk by conducting thorough data validation and verification checks. Non-compliance: Failure to comply with project requirements or methodologies can lead to invalidation of emission reductions. The VVB can mitigate this risk by ensuring that the project adheres to all relevant standards and guidelines. To mitigate this risk, the VVB must use random sampling techniques and ensure that the sample is representative of the entire population. Regular audits and



				reviews can also help identify and correct any sampling biases.
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2.3 Reporting of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and onsite assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable GS4GG requirements have been met. All CARs and CLs raised by the VKU Certification during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

In summary, 06 CLs and 04 CARs were raised during this verification which were closed successfully, and 00 FAR were raised during this verification, details are provided under section 06 of this report.

All the findings that are raised and communicated to project representative during the verification are included under Section 06. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise.

2.4 Technical Review

A draft verification report that is prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by VKU Certification were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the GS4GG rules and requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team.

During the technical review process additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to GS4GG. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the verification team. The decision taken by the Technical Reviewer is final and is authorized by the Managing Director on behalf of VKU Certification Private Limited.

3. VERIFICATION FINDINGS

This section summarises the findings from the verification of the emission reductions reported for the GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01 in Nigeria for the monitoring period 22/08/2023 – 31/08/2024 (both dates included).

The project has exclusively applied for registration under the Gold Standard (GS) with ID:12944. This sole registration status has been confirmed through rigorous scrutiny of the Gold Standard registry website. A similar comprehensive search was conducted across the CDM (Clean Development Mechanism), VCS (Verified Carbon Standard), GCC (Global Carbon Council) and UCR (Universal Carbon Registry) etc registries, using matching project titles and capacity, as well as project proponent details. This diligent examination did not use any instances of the project being registered under any of the aforementioned registries or any comparable mechanism.

Verification through Declaration:

The Project Developer (PD) has substantiated this single-registration claim through the declaration /48/ submitted, affirming that the GHG emission reductions achieved by the project during the current monitoring period will not be sought or claimed under any other registries apart from GS.

Verification through Interviews:

The VVB conducted remote interviews with selected beneficiary households, local stakeholders, and the project ground team during the verification activities. These interviews confirmed that:

- The beneficiaries have received improved cookstoves (ICS) exclusively under the Gold Standard–registered project.
- No ICS have been distributed under any other project in the beneficiaries' neighbourhoods or communities.

- The project ground team is not involved in the implementation of any parallel or overlapping cookstove carbon projects in the same geographic area under other carbon standards or registries.

Cross-Verification of GHG Benefits:

An independent search was also conducted to ascertain whether the project had been registered or claimed for other GHG-related benefits, such as Renewable Energy Certificates (RECs) and International Renewable Energy Certificates (I-RECs). This thorough assessment, coupled with the declaration submitted by the PP, corroborates that there is no double counting of GHG benefits arising from this project activity for the current monitoring period.

The project's non-rejection status by other GHG programs has also been confirmed through a meticulous assessment. A declaration attesting to this fact was duly verified and found to be accurate by the assessment team. Additionally, an independent verification process was initiated with other relevant registries, which substantiated that there were no instances of project rejection by these entities.

In conclusion, the project's exclusive registration under GS for the current monitoring period, along with its absence from rejection lists of other GHG programs, has been comprehensively verified, ensuring the integrity and credibility of its GHG benefits claims.

Details of the registries checked are as follows:

- 1) <http://cdm.unfccc.int/>
- 2) [Verra Search Page](#)
- 3) <https://cri.nccf.in/>
- 4) [International Carbon Registry - International Carbon Registry](#)
- 5) [GCC PROJECTS PORTAL \(globalcarboncouncil.com\)](#)
- 6) <https://biocarbonregistry.com/en/projects/>
- 7) <https://www.ucarbonregistry.io/>
- 8) <https://www.ecoregistry.io/>
- 9) (<https://www.carbonregistry.com/explore/projects>)

3.1 Description of project

3.1.1 General description of project

Verification Means	Remote Inspection, MR, PoA-DD, VPA-DD and supporting document
Findings	No finding was raised
Conclusions	The key objective of the programme is to replace inefficient cooking technologies such as three-stone fires with improved cookstoves that are specifically designed to use wood pellets as fuel instead of conventional firewood. The wood pellets are locally produced from waste wood or wood sourced from known and traceable sources. When used with the improved ICS, these pellets offer higher thermal efficiency and significantly lower emissions and reduce the deforestation rate. These improved stoves help reduce indoor air pollution, thereby contributing to better health outcomes for user. The assessment team conducted a verification to ensure that the general description of the project is consistent with the PoA-DD/17/ & VPA-DD/16/ and project fuel type and consumption pattern form

	the monitoring survey records and interviews with the end users during remote inspection. The team also verified the project baseline against the baseline survey report and assessed the project scenario in comparison with the monitoring/project survey report. The distribution of improved cookstoves (ICS) has been confirmed through a review of the project database, and the project location was verified during remote audit and during desk review through Google Earth Software/58/. During the remote audit, interviews with end-users substantiated the project's benefits and its alignment with the targeted Sustainable Development Goals. Based on the verification activities, the Verification Team concludes that the project activity is in compliance with the PoA-DD/17/ and VPA-DD/16/, the Template Guide of the Monitoring Report/18/, the Validation & Verification Standard Version 2.0/06/, and the Principles and Requirements Version 2.1/01/.
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3.1.2 Location of Project

Verification Means	Remote Inspection, MR, PoA-DD, VPA-DD and supporting documents, Principles and Requirements version 2.1/01/, Community Services Activity Requirements version 1.2 /08/, Google Earth Pro/58/ and Interview sessions during Remote Audit of the project Activity
Findings	No finding was raised.
Conclusions	As mentioned in section A.2 of the MR/18/, the proposed project activity is being implemented in Nigeria. The geographic coordinate of the VPA is- Latitude - 10° 00' N & Longitude - 8° 00' E



The geo-coordinates of the proposed project activity were verified by the validation team through a desk review using Google Earth software/58/. This information was further cross-checked during the remote site audit conducted from 13-February-2025 to 15-February-2025, through interviews with the local stakeholders and project developer's team during remote audit of the project activity.

Based on this assessment, the validation team confirms that the location of the project activity is accurately reported and is in accordance with the applicable requirements of the GS4GG Validation and Verification Standard version 2.0/06/.

3.1.3 Reference of applied methodology

Verification Means	Desk Review of section A.3 of Monitoring Report; Desk Review of PoA-DD/17/ and VPA-DD/16/, applied methodology TPDDTEC version 4.0/11/ and tools and remote inspection of project activity/52/
Findings	CL#02 and CAR#06 was raised and closed successfully. The details are mentioned in section 06 of this report.
Conclusions	Following a comprehensive desk review, the assessment team evaluated the methodology titled Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 04.0/11/, as detailed in the monitoring report and cross-referenced against the PoA-DD/17/ and VPA-DD/16/. The project involves the distribution

	of improved cookstove technologies to the rural and tribal communities of host country Nigeria. The assessment also considered the following methodological and guidance documents: • Tool 30: Calculation of the Fraction of Non-Renewable Biomass, Version 04.0/13/ • Standard for Sampling and Surveys for CDM Project Activities and Programmes of Activities, Version 09.0/13/ • Guideline: Sampling and Surveys for CDM Project Activities and Programmes of Activities, Version 04.0/13/ • Requirements and Guidelines: Usage Rate Monitoring, Version 2.0/12/ By thoroughly cross-verifying the data presented in the monitoring report with the PoA-DD/17/ and VPA-DD/16/, the assessment team confirms that the methodology applied in the project is consistent with the approved Gold Standard methodology. This conclusion is in alignment with Section A.3 of the monitoring report, the Validation & Verification Standard Version 2.0/06/, and the Principles and Requirements Version 2.1/01/.
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3.1.4 Crediting period of Project

Verification Means	Desk review of MR/18/, supporting documents, Preliminary-Review Form/27/ and Interviews during Remote Audit/59/.
Findings	CAR#06 was raised and closed successfully. The details are mentioned in section 06 of this report.
Conclusions	As stated in Section A.4 of the MR, the first crediting period of the VPA will last for five years, commencing on 22-August-2023 and ending on 21-August-2028. The crediting period is intended to be renewed twice, resulting in a total crediting duration of 15 years. The validation team cross-verified this information against the PoA-DD/17/, the Preliminary Review Form/27/, the project webpage, and through detailed interviews with the CME, Project Developer and their representatives during the remote audit. Based on this comprehensive assessment, the validation team confirms that the start date and overall duration of the project activity, as stated in the VPA-DD/16/, are accurate and fully compliant with applicable Gold Standard requirements.

3.2 Remaining Issues (FAR(s) from validation or previous verification)

As per the Gold Standard-approved Preliminary Review Form for VPA 12944, a total of three FARs were raised: one directed to the Project Developer (PD) and two to the VVB. Since this is a combined validation and verification assessment, all FARs raised in the Preliminary Review Form have been duly assessed and addressed. The evaluation and resolution of these FARs have been documented in the validation report of this project.

3.3 Post registration changes

Type of change(s)	Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline
Description of change(s)	NA
Assessment of change(s)	NA
Opinion on change(s)	NA

Type of change(s)	Corrections
Description of change(s)	NA
Assessment of change(s)	NA
Opinion on change(s)	NA

Type of change(s)	Changes to the start date of the crediting period
Description of change(s)	NA
Assessment of change(s)	NA
Opinion on change(s)	NA

Type of change(s)	Permanent changes from the design Certified registered monitoring plan, applied monitoring methodology or standardized baseline
Description of change(s)	NA
Assessment of change(s)	NA
Opinion on change(s)	NA

Type of change(s)	Changes to the project design of approved project activity
Description of change(s)	NA
Assessment of change(s)	NA
Opinion on change(s)	NA

3.4 Description of monitoring system applied by the project

The assessment team assessed the monitoring system implemented under the Program of Activities (PoA) to verify whether the Coordinating/Managing Entity (CME) and respective VPA Implementers are operating and monitoring their Voluntary Project Activities (VPAs) in a verifiable, consistent, and effective manner. The assessment was conducted through a combination of document review, remote inspections, and interviews with the CME, field staff, and sampled end users.

1. Documentation and Record Management:

The VVB reviewed the document control procedures maintained by the Program Manager, including standard operating procedures (SOPs), record logs, and archival systems. It was confirmed that the



CME has implemented a systematic documentation process for each VPA. The records reviewed during the assessment included device distribution logs, training records, and internal audit reports, verifying that adequate document control is in place.

2. End-User Consent and Awareness:

Through interviews with sampled end users and field staff, and review of signed user agreements, the VVB confirmed that end users are made aware of and provide consent for the inclusion of their Improved Cookstove (ICS) units in the PoA. The CME ensures this by obtaining signed user agreements during stove distribution. Additionally, awareness is promoted through various means, including informational materials, training sessions, and community meetings. Sample materials and training content were reviewed and found to be in line with the stated procedures.

3. Training and Field Staff Data Collection:

The VVB reviewed the training records maintained by the Program Manager for field staff involved in data collection and implementation. The training logs included details of the participants, dates, and training content. Interviews with field staff confirmed their understanding of the data collection procedures. The electronic database system used to manage stove distribution and monitoring data was demonstrated during the remote inspection, showing regular updates and alignment with reported values.

4. Device Distribution Records:

The VVB reviewed the electronic and physical records of ICS distribution. It was confirmed that the CME maintains a detailed distribution register containing key information such as:

- Type of stove
- Unique serial numbers
- Installation/distribution dates
- Beneficiary names and addresses

During remote inspection, the database was accessed and verified to be consistent with the values reported in the VPA-DD, MR, and ER sheets. Inconsistencies, if any, were highlighted in the DVR and addressed through revised submissions.

Means of Verification Applied:

- Document Review: SOPs, training logs, user agreements, ICS distribution database, and monitoring forms were reviewed.
- Remote Inspection: Live demonstrations of the database and storage systems, walkthrough of the document management system.
- Interviews: Conducted with CME staff, field workers, and randomly selected beneficiaries to validate the practical implementation and awareness levels.

Conclusion:

Based on the evidence gathered through the above means, the AT concludes that the monitoring system is appropriately designed and implemented by the CME and VPA Implementers. It enables consistent data collection, documentation, and tracking of distributed ICS units in a transparent and verifiable manner.

3.4.1 Compliance of monitoring plan with monitoring methodology

The verification team confirms that the monitoring plan and the monitoring system implemented are in full compliance with the applied monitoring methodology, Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 04.0/11/. All other applicable requirements of the methodology have also been met. During the verification process, all relevant monitoring parameters—as outlined in the GS4GG PoA-DD/17/ and VPA-DD/16/—were thoroughly assessed with respect to the appropriateness of the

measurement and determination methods used, the accuracy of the values applied in the emissions reduction (ER) calculations, and the quality assurance/quality control (QA/QC) measures implemented.

VVB's Opinion: The monitoring mechanism is consistent with the applied methodology and is both effective and reliable. The monitoring plan described in the GS4GG VPA-DD/16/ is aligned with the methodology Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 04.0/11/, and the approved standardized baseline adopted by the GS4GG PoA-DD/17/.

The VKU Assessment Team attests to the correctness and adequacy of the monitoring procedures, data archiving methods, and emergency procedures, based on findings from the remote audit and the desk review of supporting documentation submitted by the Project Developer (PD) that reflects the current implementation status of the project activity.

3.4.2 Compliance of monitoring activities with the registered Monitoring plan

3.4.2.1 Data and Parameters fixed ex-ante or at renewal of crediting period

Verification Means	Desk Review of section D.1 of Monitoring Report/18/; Desk Review of PoA-DD/17/ and VPA-DD/16/, applied methodology TPDDTEC version 4.0/11/, supporting documents and remote audit /52/of project activity.		
Findings	CL#02 and CAR#07 was raised and closed successfully. The details are mentioned in section 06 of this report.		
Conclusions	Details of ex-ante parameters		
	Parameter	Unit	Description
	ICS 1		
	Baseline Scenario Survey Results	NA	Report of the results of the baseline scenario survey
	ICS 2		
	Project technology description	NA	The detailed description of the project technology should, at a minimum, including the following: -Name of the manufacturer -Technology type - Continuous useful energy output demonstration -Rated thermal efficiency - Performance certifications from a national standards body or from a
The average woody biomass consumption is 6.6kg/household/day			
The technical details of all the 4 types of ICS are mentioned in Appendix 01 of VPA-MR.			

			certification body recognized by the national standards authority must also be provided.	
	ICS 3			
	Expected technical life of project technology	Time period (years)	The expected technical life of the project technology	U100: 5-6 years T100: 6-7 years PC100: 5-6 years T500: 6-7 years
	ICS 5			
	Avoidance of double counting or double claiming among project participants	NA	Evidence of avoidance of double counting or double claiming with other parties directly involved with the project or program.	The CME shall provide the project database as proof
	ICS 6			
	Avoidance of double counting or double claiming with other mitigation actions	NA	Review and analysis of mitigation actions in other voluntary market or UNFCCC/compliance mechanisms	No Value Applied
	ICS 7			
	Regulatory framework for provision of thermal energy services	NA	Evidence that the project does not undermine or conflict with any national, sub-national or local regulations or guidance for thermal energy supply or use	No Value Applied
	ICS 8			
	EF_{b,f,CO_2}	tCO ₂ /TJ	CO ₂ emission factor arising from use of fuels in baseline scenario	The methodology default value of 112 tCO ₂ /TJ for fuelwood is applied.
	ICS 9			
	$EF_{b,f,nonCO_2}$	tCO ₂ /TJ	Non-CO ₂ emission factor arising from use of fuels in baseline scenario	9.46 tCO ₂ e/TJ (AR5 GWP)
	ICS 10			
	EF_{p,f,CO_2}	tCO ₂ /TJ	CO ₂ emission factor arising from use of	The methodology default value of 112

			fuels in project scenario	tCO ₂ /TJ for fuelwood is applied.
	ICS 11			
	EF _{p,f,nonCO2}	tCO ₂ /TJ	Non-CO ₂ emission factor arising from use of fuels in project scenario	9.46 tCO ₂ e/TJ (AR5 GWP)
	ICS 12			
	NCV _{b,fuel}	TJ/ton	Net calorific value of the fuels used in the baseline	0.0156 TJ/ton
	ICS 13			
	NCV _{p,fuel}	TJ/ton	Net calorific value of the fuels used in the project	0.0156 TJ/ton
	ICS 17			
	f _{NRBi,y}	percentage	Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass or charcoal	81.91%
	ICS 18			
	P _{b,y}	mass or volume units/household-day, mass or volume units/person-meal, etc	Quantity of fuel that is consumed in baseline scenario b during year y	6.6 kg/household/day
The verification team confirms that the aforementioned parameters have been calculated in accordance with the baseline survey, baseline kitchen performance test and manufacturer specifications. Additionally, written confirmations and declarations, along with publicly available information from the Gold Standard and other voluntary standards and any recognized national or regional standards applicable to the project location have been referenced. Information from the UNFCCC Database, as well as default values specified in the applied methodology and associated tools, has also been utilized. Accordingly, the ex-ante parameters and their corresponding values are consistent with the requirements outlined in VPA-DD/16/ and the applied methodology, TPDDTEC Version 04.0/11/.				

3.4.2.2 Data and Parameters monitored

Verification Means	Desk Review of Monitoring Report/18/; Desk Review of VPA-DD/16/; supporting documents, Installation Records/Project Database/29/, Monitoring Survey/42/, Applied methodology/11/, Efficiency test certificates/45/, Technical Specifications/51/, Employment Records/44/ and remote inspection of project activity and interviews sessions/59/.
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Findings	CL#04 and CAR#07 was raised and closed successfully. The details are mentioned in section 06 of this report.																																																																		
Conclusions	Details of monitored parameter <table> <tr> <th>Parameters</th><th>Source</th><th>Value Applied</th><th>Purpose of Data</th></tr> <tr> <td colspan="4">ICS 15</td></tr> <tr> <td>Avoidance of double counting or double claiming among project technology end users</td><td>Carbon Credit Rights Transfer Agreement signed by end user and Project Database</td><td>No double counting. Evidence of carbon waiver transfer to be provided during verification</td><td>Avoidance of double counting</td></tr> <tr> <td colspan="4">ICS 16</td></tr> <tr> <td>Presence of stove stacking</td><td>Usage Survey</td><td>No Stove Stacking found</td><td>Calculation of Emission Reductions</td></tr> <tr> <td colspan="4">ICS 19</td></tr> <tr> <td>P_{p,y}</td><td>Project KPT</td><td>0.8 kg/household/day</td><td>Emission Reduction Calculations</td></tr> <tr> <td colspan="4">ICS 22</td></tr> <tr> <td>SE_{b,y,CO2}</td><td>Calculated from P_{b,y}, EF_{b,f,CO2} and other information to obtain the emissions of the required units</td><td>0.012 tCO₂/technology/day</td><td>Emission Reduction Calculations</td></tr> <tr> <td colspan="4">ICS 23</td></tr> <tr> <td>SE_{p,y,CO2}</td><td>Calculated from P_{p,y}, EF_{p,f,CO2} and other information to obtain the emissions in the required units</td><td>0.001 tCO₂/technology/day</td><td>Emission Reduction Calculations</td></tr> <tr> <td colspan="4">ICS 24</td></tr> <tr> <td>SE_{b,y,non-CO2}</td><td>Calculated from P_{b,y}, EF_{b,f,nonCO2}</td><td>0.001 tCO₂/technology/day</td><td>Emission Reduction Calculations</td></tr> <tr> <td colspan="4">ICS 25</td></tr> <tr> <td>SE_{p,y,nonCO2}</td><td>Calculated from P_{p,y}</td><td>0.001 tCO₂/technology/day</td><td>Emission Reduction Calculations</td></tr> <tr> <td colspan="4">ICS 26</td></tr> </table>			Parameters	Source	Value Applied	Purpose of Data	ICS 15				Avoidance of double counting or double claiming among project technology end users	Carbon Credit Rights Transfer Agreement signed by end user and Project Database	No double counting. Evidence of carbon waiver transfer to be provided during verification	Avoidance of double counting	ICS 16				Presence of stove stacking	Usage Survey	No Stove Stacking found	Calculation of Emission Reductions	ICS 19				P _{p,y}	Project KPT	0.8 kg/household/day	Emission Reduction Calculations	ICS 22				SE _{b,y,CO2}	Calculated from P _{b,y} , EF _{b,f,CO2} and other information to obtain the emissions of the required units	0.012 tCO ₂ /technology/day	Emission Reduction Calculations	ICS 23				SE _{p,y,CO2}	Calculated from P _{p,y} , EF _{p,f,CO2} and other information to obtain the emissions in the required units	0.001 tCO ₂ /technology/day	Emission Reduction Calculations	ICS 24				SE _{b,y,non-CO2}	Calculated from P _{b,y} , EF _{b,f,nonCO2}	0.001 tCO ₂ /technology/day	Emission Reduction Calculations	ICS 25				SE _{p,y,nonCO2}	Calculated from P _{p,y}	0.001 tCO ₂ /technology/day	Emission Reduction Calculations	ICS 26			
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ICS 26																																																																			

	$U_{p,y}$	Usage Survey	90%, for the good practice in the “Requirements and Guidelines: Usage Rate Monitoring	Emission Reduction Calculations
	ICS 27			
	$N_{b,p,y}$	Ex-post ER Sheet	36,753,230	Emission Reduction Calculations
	ICS 28			
	$LE_{p,y}$	As per section 3.11 of the respective methodology	Default discount value of 0.95	For calculation of Leakage
	SDG 3			
	$N_{SDG\ 3}$	Project Survey	97.66%	Calculation of parameter $N_{SDG\ 3}$
	SDG 5			
	$N_{SDG\ 5}$	Project Survey	95.31%	To monitor the positive contribution of the proposed project related to the SDG 5 contribution
	SDG 8			
	N_{EP}	Employee List	20	Calculation of the parameter “Number of people employed”
Assessment team checked the data and parameters monitored, sources of these parameters and values applied by cross checking the sources of data mentioned. The monitoring frequencies mentioned in the MR/18/- project database/29/ (for monitoring contribution to SDG 13), monitoring surveys (for monitoring contribution to SDG 3, 5 &13) and baseline and project performance field tests (for monitoring contribution to 13)- are found to be appropriate and in line with the monitoring methodology applied/11/ to the project activity. During the remote interviews conducted with the PD representatives and project device users, AT enquired about the information provided in the monitoring surveys with the sampled cookstove ID households and found that 100% of the devices checked are operational and no baseline or other type of cookstove is in use. Four types of ICS have				

	been distributed by the PD. 100% of the beneficiaries are happy with the project device and confirmed the reduction in fuel and time consumption for cooking meals. Also, the users observed health improvements and less smoke generation. 100% users interviewed are given training on the use of project device. The AT also checked the employment records to check the SDG 8 impact and found these to be correct. Hence, Assessment team confirms that the data and parameters monitored are consistent and reliable.
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3.4.2.3 Implementation of Sampling Plan

Verification Means	Desk Review of Monitoring Report/18/, Desk Review of PoA-DD/17/ and VPA-DD/16/, supporting documents, Installation Records/Project Database/29/, Monitoring Survey/30/, Applied methodology/11/, CDM Sampling Standard/13/, CDM Sampling Guidelines/13/ and remote inspection of project activity and interviews sessions/59/.
Findings	CL#04 and CAR#07 was raised and closed successfully. The details are mentioned in section 06 of this report.
Conclusions	The Validation team has assessed the sampling plan provided in the VPA-DD/16/ in line with the requirements of the applied methodology TPDDTEC Version 4.0/11/, GS4GG Principles and Requirements Version 2.1/01/, and the CDM Guidelines on Sampling and Surveys for CDM Project Activities and Programme of Activities Version 4.0/13/. The Validation Team has reviewed the sampling plan and sample size determination adopted by the Project Developer (PD) under the applicable methodology, “Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 4.0./11/” As part of the desk review, the VVB assessed the sampling approach and numerical justification presented by the PD, including the application of both stratified and simple random sampling techniques. The PD initially applied stratified sampling based on CDM guidelines (Guidelines for Sampling and Surveys for CDM Project Activities and PoAs, Version 4.0) using expected mean values and standard deviations. This approach yielded a sample size of 39, inclusive of a 20% non-response rate, and was distributed across the four stove types (PC100, T100, T500, and U100) based on their relative deployment quantities. However, this stratified sample resulted in underrepresentation for certain stove types, notably the T500 model, which was covered by only one sample—rendering it statistically inadequate for accurate performance and usage representation. To address this, the PD calculated a larger sample size of 128 using the simple random sampling method, which is more conservative and ensures adequate representation across all stove models. This revised sample size meets the 90/10 confidence/precision level required for large-scale projects and aligns with Section 4.4 of the TPDDTEC methodology/11/, which allows for uniform sample sizing across multiple surveys, including the baseline

	survey, usage survey (Up,y), baseline kitchen performance test (BKPT), and project kitchen performance test (PKPT). The Validation Team cross-verified these calculations and approaches with the sampling guidelines and confirms that the chosen method is appropriate. Based on the review of the documented methodology, justification for stratified and random sampling, and alignment with Gold Standard requirements, the VVB concludes that the sampling strategy is methodologically sound, conservative, and valid. The approach is considered acceptable and no non-conformities are identified. The CME initially applied a stratified random sampling approach considering the four stove types disseminated under the project. However, based on the sample size calculation (n=41), it was concluded that the resulting distribution did not sufficiently represent all strata particularly for stove types with lower penetration, such as T500. To ensure sufficient statistical representation and adherence to minimum sample size requirements, the CME opted for a simple random sampling approach with a sample size of 128 households, which includes non-responsive rate (20%). This revised sampling plan ensures that the project meets the minimum sample size requirements for populations exceeding 1,000 units, as per the applied methodology, and conforms to the 90/10 confidence/precision level required for large-scale projects under GS4GG and CDM guidelines. The use of simple random sampling is justified and deemed appropriate for this VPA, given the scale and geographical dispersion of ICS units. Based on the review of the sampling framework, sample size justification, statistical confidence level, and methodological alignment, the VVB concludes that the applied uses sample size and sampling plan is methodologically sound, statistically valid, and compliant with the relevant Gold Standard and methodological requirements.
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3.4.3 Compliance with the calibration frequency requirements for measuring instruments

Verification Means	NA
Findings	NA
Conclusions	Since no equipment requiring calibration is used, this section is not applicable.

3.5 Assessment of data and calculation of emission reductions or net removals

3.5.1 Calculation of baseline values or estimation of baseline situation of each SDG Impact

Verification Means	Desk Review of Monitoring Report/18/; Desk Review of PoA-DD/17/ and VPA-DD/16/; supporting documents, Installation Records/Project Database/29/, Monitoring Survey/30/, Applied methodology/11/,
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	Efficiency test certificates/45/, Technical Specifications/51/, Employment Records/44/ and remote inspection of project activity and interviews sessions/59/.
Findings	CL#05 and CAR#08 was raised and closed successfully. The details are mentioned in section 06 of this report.
Conclusions	SDG 3 – Good Health and Well-being The use of improved cookstoves significantly reduces household exposure to smoke and indoor air pollution, which are major contributors to respiratory diseases. By emitting considerably less smoke compared to baseline stoves, the improved cookstoves contribute to lower incidence of respiratory conditions and related health issues. This translates to reduced medical expenses and improved overall household health. Net Benefit (SDG 3): 97.66% of users reported improved health conditions after adopting the improved cookstoves, compared to 0% under the baseline scenario. SDG 5 – Gender Equality Fuelwood collection, typically the responsibility of women and girls, is time-consuming and labor-intensive. The project's improved cookstoves reduce fuel requirements by over 50%, significantly decreasing the time spent on fuel collection. This enables women and girls to reallocate time towards education, income-generating activities, or household care, thereby reducing time poverty and enhancing gender equality. Net Benefit (SDG 5): 95.31%-time savings reported with the improved cookstoves, compared to the baseline. SDG 8 – Decent Work and Economic Growth The implementation of the project supports local economic development through job creation. A total of 20 job roles have been generated in stove production and distribution, contributing to local employment and livelihood opportunities. SDG 13 – Climate Action Emission reductions are calculated in accordance with the Method 3 of approved methodology Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 4.0/11/, as referenced in the VPA-DD/16/. The project mitigates greenhouse gas emissions by displacing inefficient, high-emission cooking technologies with energy-efficient alternatives. The GHG emissions reduction achieved by the project activity in year y is calculated using Equation 3. This equation has been adjusted to account for leakage, with the project applying a default value of 0.95 to Equation 3, as specified in Section 3.10.4 of the respective

methodology. Following the TPDDTEC methodology, version 4.0, emission reductions can be estimated using the following formulas:

$$BE_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times (f_{NRB,b,y} \times SE_{b,y,CO_2} + SE_{b,y,nonCO_2})) \quad Eq. 3$$

$$PE_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times (f_{NRB,b,y} \times SE_{p,y,CO_2} + SE_{p,y,nonCO_2})) \quad Eq. 4$$

$$ER_y = BE_y - PE_y - \sum_n LE_{p,y} \quad Eq. 5$$

Where:

Parameter	Description	Value
$N_{b,p,y}$	Number of project technology-days included in the project database for baseline b/project p pair in year y (days)	36,753,230
$U_{p,y}$	Cumulative Usage rate for technologies in project scenario p in year y (fraction)	90%, for the good practice in the “Requirements and Guidelines: Usage Rate Monitoring
$f_{NRB,b,y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (fraction). This term is included when the baseline practice was use of biomass, even if a fossil fuel baseline emission factor must be applied due to the project activity introducing fossil fuel.	81.91%
SE_{b,y,CO_2}	Specific CO ₂ emissions for a baseline b technology in year y (tCO ₂ /technology*day) (Refer to Section 4.1 below for further details)	0.012 tCO ₂ /technology/day

	$SE_{b,ynon-CO2}$	Specific non-CO2 emissions for a baseline b technology in year y (tCO2/technology*day) (Refer to Section 4.1 below for further details)	0.001 tCO2/technology/day																
	$SE_{p,yCO2}$	Specific CO2 emissions for a Project p technology in year y (tCO2/technology*day) (Refer to Section 4.1 below for further details)	0.001 tCO2/technology/day																
	$SE_{p,ynon-CO2}$	Specific non-CO2 emissions for a Project p technology in year y (tCO2/technology*day) (Refer to Section 4.1 below for further details)	0.001 tCO2/technology/day																
	$LE_{p,y}$	Leakage for project scenario p in year y (tCO2e/yr)	Apply a default adjustment factor of 0.95 to the emission reductions to approximate leakage emissions.																
<table><tr><th>Vintage Year</th><th>Monitoring Period Covered</th><th>Period</th><th>Verified Emission Reductions (tCO2e)</th></tr><tr><td>2023</td><td>22/08/2023 31/12/2023</td><td>–</td><td>48,231 tCO2e</td></tr><tr><td>2024</td><td>01/01/2024 31/08/2024</td><td>–</td><td>207,524 tCO2e</td></tr><tr><td>Total</td><td>22/08/2023 31/08/2024</td><td>–</td><td>255,755 tCO2e</td></tr></table>				Vintage Year	Monitoring Period Covered	Period	Verified Emission Reductions (tCO2e)	2023	22/08/2023 31/12/2023	–	48,231 tCO2e	2024	01/01/2024 31/08/2024	–	207,524 tCO2e	Total	22/08/2023 31/08/2024	–	255,755 tCO2e
Vintage Year	Monitoring Period Covered	Period	Verified Emission Reductions (tCO2e)																
2023	22/08/2023 31/12/2023	–	48,231 tCO2e																
2024	01/01/2024 31/08/2024	–	207,524 tCO2e																
Total	22/08/2023 31/08/2024	–	255,755 tCO2e																
However, the VERs is claimed only for the period from 22/08/2023 to 31/08/2024, in accordance with the application of retroactive performance certification as stipulated under Paragraph 5.1.37 of the Gold Standard Principles and Requirements, which allows retroactive crediting for up to two years prior to the Project Design Certification date. . The Verification Team has reviewed the Monitoring Survey Sheet to cross-verify the claims made by the PD under SDG 3 (Good Health																			

	and Well-being) and SDG 5 (Gender Equality). Additionally, employment records, agreement letters, and pay slips were examined to verify job creation under the project activity, in alignment with SDG 8 (Decent Work and Economic Growth). To assess the emission reductions achieved (SDG 13 – Climate Action), the team reviewed the Ex-post Emission Reduction Sheet, Baseline Kitchen Performance Test (KPT) data, Project Kitchen Performance Test KPT sheet, and other relevant supporting documents. These verifications confirm the PD's claims regarding the project's contributions to the targeted Sustainable Development Goals.
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3.5.2 Calculation of project value or estimation of project situation of each SDG Impact

Verification Means	Desk Review of Monitoring Report/18/; Desk Review of PoA-DD/17/ and VPA-DD/16/; supporting documents, Installation Records/Project Database/29/, Monitoring Survey/30/, Applied methodology/11/, Efficiency test certificates/45/, Technical Specifications/51/, Employment Records/44/ and remote inspection of project activity and interviews sessions/59/.
Findings	CL#05 was raised and closed successfully. The details are mentioned in section 06 of this report.
Conclusions	The calculation and estimation of each SDG Impact indicator have been carried out in accordance with the requirements outlined in the applied methodology and corresponding with VPA-DD & applied methodology i.e., The Gold Standard Methodology; TPDDTEC REDUCED EMISSIONS FROM COOKING AND HEATING: Technologies and Practices to Displace Decentralized Thermal Energy Consumption v4.0. The calculations for each SDG are also explained in sections above. The parameters used were appropriate and supported by evidence. Following the resolution of CL#05, no outstanding issues remain. Therefore, the reported SDG impacts are considered credible, consistent, and in compliance with the applicable standards.

3.5.3 Calculation of Leakage

Verification Means	Desk Review of Monitoring Report/18/; Desk Review of PoA-DD/17/ and VPA-DD/16/;
Findings	No finding was raised.
Conclusions	PD has applied an adjustment factor of 0.95 to ERs in order to account for the leakages, as per the clause 3.11.2 (Option 1) of applied methodology/11/. AT confirms that the leakage calculation is correct as per para 3.11.2 of the methodology/11/.

3.5.4 Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

SDG and SDG Impact	Baseline Estimate	Project Estimate	Net Benefit	Conclusion
SDG 13	0	255,755	255,755	

Reduction in GHGs emissions				AT verified all SDG impacts in both- the baseline scenario and project scenario- as described in Section 3.5.1 and 3.5.2 of this report. As per the values applied of each SDG impact in both situations, AT confirms that calculation of net benefit of each SDG impact mentioned in the adjacent column is correct and consistent with the SDG Impact Tool/25/ provided by PD.
SDG 3 Perceived health conditions improved by the ICS users	0	97.66	97.66%	
SDG 5 Perceived time saved by women in fuel collection and cooking	0	95.31%	95.31%	
SDG 8 Total number of jobs created	0	20	20	

3.5.5 Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

SDG and SDG Impact	Values estimated in ex ante calculation of approved PDD			Actual values achieved during this monitoring period		Conclusion
SDG 13 Reduction in GHGs emissions	Vintage	ERs		Vintage	ERs	3.5.5.1 The SDG impacts mentioned in the adjacent column is as per the Section E.5 of MR/18/. AT confirms that the ex ante values are consistent with the values mentioned in VPA-DD/16/ and the assessment of actual values of current monitoring period is mentioned in Section 3.5.1 to Section 3.5.4 of this report. Vintage 1 (01 August 2023 – 31 December 2023) The lower Actual ERs achieved during Vintage 1 compared to the estimated ERs are justified as follows: 1. Delayed Implementation of
	2023	111,960		2023	48,231	
	2024	198,845		2024	207,524	
	Total	310,806		Total	255,755	
SDG 3 Perceived health conditions improved by the ICS users	100%			97.66%		
SDG 5 Percieved time saved by women in fuel collection and cooking	100%			95.31%		
SDG 8 Total number of jobs created	20			20		

			Improved Cookstoves (ICS): Although the project start date is 01 August 2023, not all ICS units were distributed and installed on this date. A significant proportion of the cookstoves were installed after the project start date, which reduced the effective operational days during the first monitoring period and consequently lowered the ER generation. 2. Conservative Lag Time Assumption: The Project Developer (PD) applied a conservative approach by considering a one-day lag time between stove installation and commencement of emission reductions, further reducing the credited ERs for this vintage. 3. Application of Retroactive Crediting in Line with GS Requirements: In accordance with Paragraph 5.1.37 of the Gold Standard Principles and Requirements, the PD considered ERs from 10 August 2023, instead of the monitoring start date of 01 August 2023. Paragraph 5.1.37 allows retroactive performance certification for up to two years prior to the Project Design
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			Certification date. The applied retroactive period is therefore compliant with Gold Standard requirements and results in a shorter eligible monitoring duration for Vintage 1. Based on the above factors, the reduction in ERs for Vintage 1 is considered reasonable, conservative, and methodologically justified. Vintage 2 (01 January 2024 – 31 August 2024) The higher Actual ERs reported for Vintage 2 compared to the estimated ERs are justified as follows: 1. Difference Between Estimated and Actual Usage Rates: The estimated ERs for Vintage 2 were calculated assuming an expected operational/usage rate of 80%. However, the usage survey results indicate an actual operational rate of 100% during the monitoring period. 2. Conservative Application of Usage Rate: Despite the observed 100% usage rate, the PD applied a conservative usage rate of 90% for ER calculations, in accordance with applicable usage rate guidelines. This conservative
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			adjustment was consistently applied for both Vintage 1 and Vintage 2. 3. Impact on Emission Reductions: The higher effective stove usage during Vintage 2, even after applying the conservative 90% usage factor, resulted in higher Actual ERs compared to the original estimates. The increase in ERs for Vintage 2 is therefore adequately justified, supported by monitored survey data, and remains conservative and compliant with Gold Standard requirements.
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3.5.6 Remarks on difference from estimate value in registered PDD

Verification Means	Desk review of MR/18/ and VPA-DD/16/, Ex-Post ER Sheet/19/
Findings	No finding was raised.
Conclusions	▪ SDG 13: The ex-ante estimates value of the emission reductions for the monitoring period is 310,806 tCO₂e and the actual emission reductions achieved for the monitoring period is 255,755 tCO₂e. Since actual emission reduction is lower than the estimated value and hence it is acceptable to the AT. ▪ SDG 3: The actual value achieved is lower than the estimated value. ▪ SDG 5: The actual value achieved is lower than the estimated value. ▪ SDG 8: The actual value achieved is equal to the estimated value. The confirmation of the above statements had been carried out by conducting desk review of supporting documents provided by PD and checking the implementation status of the project activity and interviewing the PD representatives, baseline cookstove users and project device users during remote audit.

3.6 Safeguards Reporting

As per cross verification of documents mention below

1. Registered VPA-DD v8.0 /16/

2. GS4GG Safeguarding Principles & Requirements v2.1/01/
3. Template Guide Monitoring Report /14/
4. Local Stakeholder Consultation meeting evidences

Assessment Team confirms that none of the principles are adversely impacted by the project and also does not seek gender certification at performance level because gender responsive guidelines are optional for this project, hence Safeguarding Reporting is not applicable for the given project activity which is in line with GS4GG requirements. Assessment Team confirms that since no safeguarding principles were included in the monitoring plan outlined in the registered Gold Standard Project Design Document (VPA- PDD), evaluating the relative success or failures, or improvements to proposed mitigation measures in this context is not applicable. and in compliance with GS4GG Safeguarding Principles Requirement v2.1 dated: 31/01/2025/01/.

3.7 Stakeholder inputs and legal disputes

3.7.1 List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

The Assessment Team confirms that the Project Developer follows a continuous grievance redress mechanism, as verified through interviews with local stakeholders, the Project Developer, and the Operations & Maintenance (O&M) teams. Some grievances regarding the breakage of the handle of the ICS and stove cleaning were received during the current monitoring period.

Based on the remote audit and stakeholder interviews, the Assessment Team further confirms the following:

1. Stakeholder Awareness: Local stakeholders are aware of the grievance mechanism and understand how to report grievances.
2. Grievance Register: The CME has maintained a grievance register/37/, which is placed in a publicly accessible location at the project site, enabling stakeholders to provide feedback.
3. Ongoing Monitoring: The grievance register is regularly monitored and managed by the grievance redress team, which actively addresses any reported issues related to the use and safety of the project technology.

As confirmed through the grievance register/37/, verification activities, and remote inspection, some grievances were recorded during this monitoring period. Furthermore, interviews with end-users/34/ revealed positive feedback regarding the project's implementation and benefits.

3.7.2 Report on any stakeholder mitigations that were agreed to be monitored.

As per Section G.2 of the Monitoring Report/18/, no mitigation measures involving stakeholders were required to be monitored during the current monitoring period. This has been cross-verified through a review of the Local Stakeholder Consultation Report/31/ and the VPA-DD /16/, both of which confirm that no objections or disagreements were raised regarding the project activity. Furthermore, stakeholders provided positive feedback during the consultation meeting held on 25-July-2024.

3.7.3 Details of legal contest that has arisen with the project during the monitoring period

The Assessment Team confirms that the GS4GG project titled "GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01" is in full compliance with the legal environmental, ecological, and social regulations of the Host Country, Nigeria. This assessment aligns with the requirements outlined in Section 12.10 of the GS4GG Validation and Verification Standard Version

2.0/06/, as applicable at the time of validation for design certification. Furthermore, no legal challenges have been reported during the certification process that question the project's compliance with national regulations.

3.8 Quality of evidence to determine emission reductions

During the verification of the reported emission reductions, VKU ensured that a clear and complete audit trail was maintained, containing all evidence and records supporting the figures stated in the Monitoring Report/18/ and Emission Reduction Sheet/19/. All source documents forming the basis for assumptions and other information underlying the GHG data are referenced in the relevant sections of this report.

In assessing the audit trails, VKU specifically examined:

1. The availability and adequacy of evidence in terms of both frequency and coverage across the full monitoring period, from 01-August-2023 to 31-August-2024 (inclusive).
2. The source and nature of the evidence. Where comparable information was available from sources other than those cited in the Monitoring Report/18/, VKU cross-checked the data against additional documentation and evidence provided by the PD to the VVB, as outlined in Section 5. This was done to ensure that all stated figures were correct, accurate, conservative in approach, and transparently reported.

All monitoring records were found to be archived in accordance with the requirements of the registered monitoring plan. No significant data gaps or lack of supporting evidence were identified during this verification. The assessment team confirms that the monitoring system implemented by the PD meets the necessary quality standards and that all internal data are subject to appropriate QA/QC procedures.

VKU concludes that the method used to calculate emission reductions is accurate, results in a conservative estimate, and is in full alignment with the applicable GS4GG Principles and Requirements version 2.1/01/ as well as the registered Gold Standard methodology: "Reduced Emission from Cooking and Heating – Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 04.0"/11/.

A total of (06) Corrective Action Requests (CARs), (06) Clarification Requests (CLs), and 00 Forward Action Requests (FARs) were raised during the current monitoring period. The Assessment Team confirms that all CARs and CLs have been satisfactorily addressed and closed.

3.9 Management system and quality assurance

The verification report prepared by the verification team underwent an independent technical review conducted by a qualified reviewer with expertise covering all technical aspects relevant to the project activity. The reviewer is independent of the verification team to ensure impartiality.

The scope of the review included the Monitoring Report/18/, the Emission Reduction calculation spreadsheet/19/, and other associated documentation, including internal records and working papers developed by VKU for this project.

During the course of this review, new findings may be raised, or previously closed findings may be reopened. Any such findings must be addressed and resolved to the satisfaction of the technical reviewer

prior to the submission of the request for issuance to Gold Standard. The reviewer may either approve the report as submitted or return it with comments, findings, or issues requiring further action by the verification team.

The final verification report, once reviewed by the independent technical reviewer, was subjected to an internal quality assurance check to ensure full compliance with VKU's established procedures. This quality review confirmed that the verification opinion and conclusions were formulated objectively and are in alignment with the applicable GS4GG rules and requirements.

Upon successful completion of the technical and quality reviews, the verification report, along with the final MR and ER calculation spreadsheet, is deemed final and has been formally authorized for submission to Gold Standard by the Director on behalf of VKU.

3.10 Verification Assessment

All necessary data were made available to the assessment team by the CME during the remote audit/59/ and subsequently provided as supporting evidence during the verification assessment. These data were monitored in accordance with the required monitoring frequency as outlined in the registered monitoring plan.

The means of verification for the parameters used in calculating baseline emissions are described in detail in the relevant sections of this report. The verification team confirms the correctness of the formulas and methodologies applied in accordance with the GS4GG Validation and Verification Standard Version 2.0/06/.

The applied default values, emission factors, and underlying assumptions used in the baseline emission calculations are deemed appropriate, reasonable, and consistent with the applicable methodology. The verification team attests to the accuracy and justification of the methods and data used for calculating baseline emissions.

Also provide the information about the type of findings identified in each section of monitoring report as per the GS4GG VVS.

SDG indicators during this current monitoring period from 01-August-2023 to 31-August-2024.

SDG 13: Actual emission reduction achieved is 255,755 tCO₂e calculated as per the applied methodology. The source and QA/QC process is verified from the Ex-post ER Calculation Sheet/19/, fNRB Sheet/26/ and is calculated as per monitoring survey/30/, project database/29/, default values as per applied methodology/11/.

SDG 3: The monitoring survey results indicate that 97.66% of users reported a perceived reduction in household smoke and a decrease in associated health conditions, including coughing, respiratory illnesses, and eye irritation. These findings were verified through user survey forms collected by the PD during the monitoring period.

The assessment team cross-checked these survey results through interviews with end-users conducted during the remote audit. The consistency between documented responses and field interviews confirms the validity of the reported improvement in household health and air quality.

SDG 5: Monitoring survey results show that 95.31% of respondents reported a reduction in the time spent collecting fuelwood following the adoption of improved cookstoves. This significant time savings contributes directly to enhancing gender equality by reducing the burden of fuel collection, a task primarily carried out by women.

The reported data was verified through monitoring survey forms collected by the PD and detailed in the Monitoring Survey Report. The assessment team cross-validated this information through interviews with beneficiaries conducted during the remote audit, confirming the consistency and reliability of the reported outcomes.

SDG 8: A total of 20 individuals were trained and employed as part of the project activities. The training focused on equipping field staff with the skills necessary for beneficiary data collection and monitoring of the project.

This information was verified through training attendance records maintained by the Project Developer and reviewed during the assessment process. The training contributes to local capacity-building and supports the creation of decent work opportunities in line with SDG 8.

Verification Approach:

The verification process was conducted in accordance with the Gold Standard requirements and consisted of the following key phases:

- **Document Review:**
A comprehensive review of all relevant documents was carried out, including the Monitoring Report, Monitoring Plan, applied methodology, GS PoA-DD, GS VPA-DD, QA/QC procedures, and other supporting documentation to ensure consistency and compliance.
- **Remote Audit:**
The verification team conducted remote audit to assess the actual implementation of the project. This included data cross-checking, interviews with project personnel and end-users, and a review of the operational setup against the reported information.
- **Resolution of Discrepancies:**
Any non-conformities or clarifications identified during the verification process were addressed through communication with the Project Developer. All discrepancies were resolved prior to the finalization of the verification report.

3.11 Verification Opinion

VKU Certification, contracted by OYU Green Private Limited., has performed the independent verification of the emission reductions for the GS Project ID 12944 with title “GS 12943 VPA-1 GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” for the monitoring period 22/08/2023 to 31/08/2024 as reported in the Monitoring Report /18/. OYU Green Private Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. VKU commenced the verification against the baseline and monitoring methodology TPDDTEC, version 4.0/11/ the monitoring plan contained in the VPA-DD Version 8.0 dated 23/02/2026/16/, and Monitoring Report Version 7.0 dated 23/02/2026/18/.

VKU Certification confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. This verification report has been prepared using the latest available template specified by GS4GG registry and complies with the instructions to follow as per GS4GG principle and requirements v2.1/01/ and GS4GG validation and verification standard v2.0./06/



The verification activities were conducted in accordance with VKU Certification's Quality Manual System, VKU Certification's SOP 4 and as per the GS4GG validation and verification standard v2.0.

The verified emission reductions for the monitoring period 22/08/2023 to 31/08/2024 are summarized vintage-wise as follows:

Vintage Year	Monitoring Period Covered	Verified Emission Reductions (tCO ₂ e)
2023	22/08/2023 – 31/12/2023	48,231 tCO ₂ e
2024	01/01/2024 – 31/08/2024	207,524 tCO ₂ e
Total	22/08/2023 – 31/08/2024	255,755 tCO ₂ e

The comparatively lower emission reductions achieved during **Vintage 2023** are attributable to the phased distribution and installation of improved cookstoves following the project start date, the application of conservative assumptions including a lag time between stove installation and commencement of emission reductions.

The higher emission reductions achieved during **Vintage 2024** are justified by the increased number of operational cookstoves over a full monitoring year and higher observed stove usage rates. While survey results indicated a 100% usage rate, a conservative usage factor of 90% was applied in the emission reduction calculations, consistently across both vintages, in line with Gold Standard requirements. This resulted in higher verified emission reductions for Vintage 2024 while maintaining conservative and compliant assumptions.

As a result, it is concluded that the above vintage-wise emission reductions from the GS VPA ID 12944 “GS 12943 VPA-1 GS 12943 VPA-1 OYU– Building Sustainable Nigerian Communities VPA 01” are correctly reported and verified with the Monitoring Report (final) Version 7.0 dated 23/02/2026, the corresponding ER sheet for the monitoring period 22/08/2023 to 31/08/2024 (including both days) and the information submitted on the Gold Standard Assurance Platform.

VVB opinion on issuance as per the ISO 14064-3:2019/15/, clause 9 which is compliance with GS4GG principles and requirement v2.1/01/ and GS4GG validation and verification standard v2.0/06/.

VVB Opinion	Conclusion
Positive	☒ (Mark Tick if applicable)
Negative	☐ (Mark Tick if applicable)

4. REFERENCE/DOCUMENTS USED IN THE VERIFICATION

S. No.	Document Name	Source
1.	<u>GS4GG Principles & Requirement</u> <u>Version 2.1 Dated: 31-January-2025</u>	GS4GG webpage
2.	<u>GS4GG Safeguarding Principles & Requirement</u> <u>Version 2.1 Dated: 29-June-2023</u>	GS4GG webpage
3.	<u>GS4GG Stakeholder Consultation and Engagement Requirements</u> <u>Version 2.1 Dated: 14-June 2022</u>	GS4GG webpage
4.	<u>GS4GG Programme of Activity Requirements and Procedures</u> <u>Version 3.0 Dated: 12-November-2024</u>	GS4GG webpage
5.	<u>GS4GG Site Visit and Remote Audit Requirements and Procedures</u> <u>Version 2.0 Dated: 30-May-2023</u>	GS4GG webpage
6.	<u>GS4GG Validation and Verification Standard</u> <u>Version 2.0 Dated: 12-November-2024</u>	GS4GG webpage
7.	<u>GS4GG Validation/Verification Body Requirements</u> <u>Version 3.0 Dated: 12-November-2024</u>	GS4GG webpage
8.	<u>GS4GG Community Service Activity Requirements</u> <u>Version 1.2 Dated: 24-October-2019</u>	GS4GG webpage
9.	<u>GS4GG Gender Equality Requirements</u> <u>Version 2.0 Dated: 16-May-2023</u>	GS4GG webpage
10.	<u>GHG Emission Reduction and Sequestration Product Requirements</u> <u>Version 3.0 Dated: 12-November-2024</u>	GS4GG webpage
11.	<u>Methodology: Reduced Emissions from Cooking and Heating: Technology and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)</u>	GS4GG webpage

	<u>Version 4.0 Dated: 07-October-2021</u>	
12.	<u>Requirement and Guidelines: Usage Rate Monitoring</u> <u>Version 2.0 Dated: 27-October-2020</u>	GS4GG webpage
13.	1. <u>CDM: Tool 30- Calculation of the Fraction of Non-Renewable Biomass Version 4.0 Dated: 08-September-2022</u> 2. CDM Sampling and surveys for CDM project activities and programmes of activities Version 04.0- Guideline 3. CDM Sampling and surveys for CDM project activities and programmes of activities Version 09.0-Standard	GS4GG webpage
14.	GS4GG MR Template Guide	GS4GG webpage
15.	ISO 14064-1 and ISO 14064-3 Dated: May 2019	ISO
Supporting Documents		
16.	VPA Design Document of GS_12943, Version 8.0 Dated: 23-February-2026	CME
17.	Programme of Activity Design Document of GS_12943, Version 6.2 Dated: 23-February-2026	CME
18.	Monitoring Report of GS_12944, Version 7.0, Dated: 23-February-2026	CME
19.	Ex-Ante ER Calculation Sheet and Ex-Post ER Sheet	CME
20.	Ex-Ante ER Calculation tool for ICS Model T100	CME
21.	Ex-Ante ER Calculation tool for ICS Model T500	CME
22.	Ex-Ante ER Calculation tool for ICS Model PC100	CME
23.	Ex-Ante ER Calculation Tool for ICS Model U100	CME
24.	GS_12943, PoA-Validation Report	
25.	SDG Impact tool	CME
26.	f_{NRB} Calculation Sheet	CME
27.	GS Preliminary Review Form Dated: 15-October-2025	CME
28.	GS_12943 Baseline Sample Survey Sheet	CME
29.	GS_12944 Project Database	CME



30.	GS_12944 Monitoring Survey	CME
31.	Stakeholder Consultation Report version 2.0 Dated: 18-September-2024	CME
32.	KPT results	CME
33.	Evidence to verify 1 st user	CME
34.	End-User Agreement Card	CME
35.	Baseline Survey Form	CME
36.	Photographs as evidence of distribution of ICS	CME
37.	Grievance Register	CME
38.	Local Stakeholder Consultation Feedback Forms	CME
39.	Manufacturing Plant Images	CME
40.	Local Stakeholder Meeting Photographs	CME
41.	Mobile Application Screenshots used for User Registration	CME
42.	Monitoring Survey Form	CME
43.	Organizational Policies	CME
44.	Employment Records	CME
45.	Evidence to verify thermal efficiency of all the four types of ICS used under the project activity.	CME
46.	Attendance Sheets of trainings	CME
47.	Training Photographs	CME
48.	Declaration for 'No Double Counting'	CME
49.	Baseline Survey Report	CME
50.	ODA Declaration	CME
51.	Technical Specification	CME
VVB Documents		
52.	VKU.F46.W Attendance Sheet for Remote Audit_VKU.JVV.06.24_GS_12943	VKU Internal Documents



53.	VKU.F.24.W Audit Plan_VKU.JVV.06.24_GS_12943	VKU Internal Documents
54.	VKU.F.93.W Sampling Plan_VKU.JVV.06.24_GS_12943	VKU Internal Documents
55.	VKU.F.62.W Field Assessment Checklist_VKU.JVV.06.24_GS_12943	VKU Internal Documents
56.	VKU.F70.W Strategic Analysis Plan_VKU.JVV.06.24_GS_12943	VKU Internal Documents
57.	VKU.F.65.W Remote Audit Planning Term Sheet_VKU.JVV.06.24_GS_12943	VKU Internal Documents
58.	<u>Google Earth Software</u>	Google
59.	Personal Interviews and Focused Group Discussions during Remote Audit	VKU
60.	Photographs/Evidence captured during Remote Audit	VKU
61.	<u>Climate Action Tracker</u>	Web search

5. Certification Statement

VKU Certification Private Limited (VKU Certification), contracted by OYU Green Private Limited, has performed the independent verification of the emission reductions for the GS4GG project activity 12943 “OYU-Building Sustainable Nigerian Communities” in Nigeria for the monitoring period 22/08/2023 – 31/08/2024 as reported in the Monitoring Report (public) Version 7.0 dated 23/02/2026/18/. The OYU Green Private Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity

VKU Certification commenced the verification on the basis of the baseline and monitoring methodology TPDDTEC V4.0/11/, the monitoring plan contained in the VPA-DD Version 8.0 dated 23/02/2026/16/, Monitoring Report (public) Version 7.0 dated 23/02/2026/18/ as per the methodology described under Section 2 of this report.

VKU Certification’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. VKU Certification planned and performed the verification by obtaining evidence and other information and explanations that VKU Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 22/08/2023 – 31/08/2024 are fairly stated in the Monitoring Report (final) Version 7.0 dated 23/02/2026. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology TPDDTEC V4.0/11/ and the monitoring plan contained in the VPA-DD Version 8.0 dated 23/02/2026/16/.

VKU Certification Private Limited is able to certify that the emission reductions from the GS4GG project activity 12943 “OYU-Building Sustainable Nigerian Communities” in Nigeria during the period 22/08/2023 – 31/08/2024 (including both days) amount to 255,755 tCO₂e.

Verified and certified emission reductions as per commitment period:

Commitment period	Amount
From: 22/08/2023 to: 31/08/2024 (1st commitment period)	255,755 tCO ₂ e

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Dr Vikas Kumar Aharwal

Founder and Director

VKU Certification Private Limited

27/02/2026

Indore, India

6. VERIFICATION FINDINGS (CAR/CL/FAR)

Finding No. 01	Date: 07/03/2025
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised :	
Desk Review	☐
On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
In the ex-post ER sheet: - In the cell O12 of ex-post ER sheet, it is mentioned that ‘Is the project device still in operation’, for which all the end-users have answered ‘No’. AT could not trace any clarification on this, - In the ex-post ER sheet, it is not clear to assessment team why some columns are left blank in the monitoring survey results. - It is not clear to assessment team why SDG 1, 7, 8, 12 and 15 are considered in this ER sheet, while these SDGs are not mentioned in the MR and VPA-DD. - The total sample size as per the ‘Monitoring Survey Results’ is 128. However, in the Ex-post ER sheet ‘GS Sampling Guide’, the sample size is mentioned as 108. AT is not able to trace clarification on this.	
Evidence	
EX-Post ER sheet version 1 dated 30/11/2024	
1st Response from PD	Date: 21-03-2025
In the ex-post ER sheet: - Updated - A blank value represents that there was no clear response from the beneficiary on the respective question - Updated - Updated.	



Documents provided by PD for review	
1. Ex post ER_GS12944 v1.2 2. Employee Records	
1st Review by Assessment Team	Date: 02/04/2025
In the ex-post ER sheet: 1. PD has updated the cell and the statement has been changed to 'is the baseline device still in operation'. Hence, the comment the is closed. 2. PD has clarified in the ER sheet that some end users have not responded to some questions. However, this is not mentioned in the cells and the cells are left blank. PD has not updated the ER sheet. (open) 3. PD has updated the ER sheet tab 'SDG impact'. The selected SDGs are now consistent with MR and VPA-DD. Hence, the comment is closed. 4. The sample size in the Ex-post ER sheet 'GS Sampling Guide' has been corrected. It is now consistent with monitoring survey results. Hence, the comment is closed.	
2nd Response from PD	Date: 29/04/2025
In the ex-post ER sheet: In the ex-post ER sheet, the cells are updated with responses "NA" in the monitoring survey results. The ex-post ER sheet updated.	
Documents provided by PD for review	
Ex post ER_GS12944 v1.2	
2nd Review by Assessment Team	Date: 25/06/2025
In the ex-post ER sheet: 2. the PD has updated the responses in the ER sheet and it is found to be correct. Hence, the finding is applied. Finding 01 is closed.	

Finding No. 02	Date: 07/03/2025
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised: Desk Review ☒ On-site/remote/hybrid assessment ☒ Technical Review ☐ Project Review Report by Registry ☐	
Requirement	

- GS4GG Programme of activity Requirements and Procedures; version 3.0
- GS4GG Principles & Requirements; version 2.1
- GS4GG Monitoring Report Template Guide; version 1.1
- Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2
- Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0

Non-Conformity

Key project information:

1. Assessment team is not able to trace any evidence to confirm the date of last annual report. Moreover, as per Section 8.8.1 of the GS Programme of Activity Requirements and Procedures, version 3.0: *'Transparent, annual update reports must be provided for VPAs that have achieved Design Certification status or successfully transitioned to GS4GG.* The project status is 'Listed' as per the project webpage. Assessment team is unable to trace clarification on this date.

In section A.3:

2. During the desk review of Monitoring report, assessment team could not trace any reference for Usage Rate monitoring, version 4.0 in section A.3 of MR.

Section B.1

3. The desk review of PoA-DD and remote observations indicate that four ICS models with varying efficiencies are disseminated in this project. However, it is unclear whether the provided technical specifications provided here cover all models.

Furthermore, Assessment Team cannot trace any evidence to confirm the technical specifications of ICS models.

4. The AT is unable to trace the start and end dates of the distribution. Additionally, based on the remote inspection and interviews, the AT has identified that the PD manufactured the ICS in-house; however, the AT is unable to find any evidence confirming the cookstove manufacturing process.

5. The AT has identified that the PD has not considered any lag time between the installation of the ICS and the adoption of its use by the end user.

Section C

6. During desk review of MR, it is mentioned that “the CME made sure that end users know about and agree to their unit ICS being part of the PoA”. Assessment team could not trace any evidence regarding the information materials, social media and contracts used by PD to make end users aware ICS.

7. During desk review of MR and remote observations, it is found that project field staff are provided trainings in the project. However, assessment team could not trace the records of training sessions provided to field staff.

8. The AT is unable to trace any manuals for guidance, training, or monitoring for the team.

9. The AT is unable to trace any list prepared by the ground team for updating the information electronically.

Evidence	
Monitoring Report; version 01 dated 30/11/2024	
1st Response from PD	Date: 21-03-2025
Key project information: 1. This section will be updated after Design certification. In section A.3: 2. Reference is now updated Section B.1 3. Supporting evidence is now submitted. The Project developer has provided a description of common features of technology being implemented which are same for all the ICS. Detailed technical specifications are provided in supporting document submitted for your kind review. 4. Supporting document is submitted for: a. First and last user agreements b. Manufacturing facility pictures 5. PD has now considered a one-day lag time between the installation of the ICS and the adoption of its use by the end user. Updated in MR Section C 6. Submitted as supporting document. 7. Records of training sessions are now submitted as supporting document. 8. Training manual is submitted as supporting document 9. The data is recorded manually and transferred into excel sheets which are later stored by CME on cloud based mobile application for data storage purposes.	
Documents provided by PD for review	
1. GS12944 Monitoring-Report ICS NIGERIA_v2.0 2. Training material 3. Training attendance sheet	
1st Review by Assessment Team	Date: 02/04/2025
Key project information: 1. The section has been updated. PD has clarified that the section for date of last annual report is not applicable as the project is not registered yet and is undergoing combined validation and verification. Hence, the comment is closed. In section A.3: 2. The reference for Usage Rate monitoring has been added in the section A.3 of the updated MR. Hence, the comment is closed. Section B.1 3. PD has submitted the manufacturer specifications for all the four ICS models to confirm the technical specifications provided in the MR. Hence, the comment is closed.	

4. Assessment team confirms that PD has incorporated the start and end dates of ICS distribution under the project, i.e., from 01/08/2023 to 31/12/2023. It is consistent with project database. PD has also provided sample copies of end user agreements as supporting evidence. **Hence, the comment is closed.**

5. The section has been updated in the MR. Also, it is clarified that PD has considered a one-day lag time between the installation of the ICS and the adoption of its use by the end user. It has been cross-checked from ER calculation sheet and found to be appropriate. **Hence, the comment is closed.**

Section C

6. AT cannot trace any evidences regarding the use of print media, as mentioned in the MR, to spread awareness regarding the ICS and PoA among end users. (open)

7. PD has submitted images of trainings as supporting evidence for the trainings provided to field staff. However, the images do not provide a clarity on the claim that project field staff are provided trainings in the project. (open)

8. Assessment team is still not able to trace any records of guidance, training or monitoring for the team. (open)

9. PD has clarified that the data is recorded manually and transferred into excel sheets which are later stored by CME on cloud based mobile application for data storage purposes. However, assessment team could not trace any evidence for the manual recording of data by the field staff. (open)

2nd Response from PD

Date: 29/04/2025

Section C

6. PD shared poster/brochure used to spread awareness regarding the ICS and PoA among end users, also mentioned in the local stakeholder report.

7. PD shared the training modules which contains detail about training conducted by PD.

8. PD shared the training modules which contains detail about records of guidance, training and monitoring.

9. PD has shared the record for the same.

Documents provided by PP/PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0, poster/ brochure

2. Training module

3. Record Book

2nd Review by Assessment Team

Date: 25/06/2025

Section C

6. PD has submitted the local stakeholder consultation report and it contains all the required information regarding the mode that they have used to spread awareness among local people and it is found to be appropriate. **Hence, the finding is closed.**

7. PD has now submitted the training modules along with the training photographs and it is found to be appropriate. **Hence, the finding is closed.**

8. PD has now submitted the training modules which contains detail about records of guidance, training and monitoring and it is found to be appropriate. **Hence, the finding is closed.**

9. PD has submitted the evidence for the data has been recorded manually and it is found to be correct. **Hence, the finding is closed.**

Finding No. 03	Date: 07/03/2025
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised :	
Desk Review	☒
On-site/remote/hybrid assessment	☒
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Section D.1 ICS 1; Baseline scenario survey results: 1. Assessment team is unable to trace the baseline survey report for the project to confirm the details regarding baseline scenario in the PoA-DD. ICS 2: Project technology description 2. Assessment team could not trace the exact source for data that has been used by the PD out of all the options mentioned in the methodology TPDDTEC. 3. In the column ‘Value(s) applied: As per the desk review of VPA-DD and remote audit observations, four types of ICS have been implemented under this project. it is not clear to assessment team whether the technical details provided here correspond to all the ICS. ICS 3: Expected technical life of project technology 4. In the column ‘description’: There is ambiguity regarding the description of the parameter “Expected technical life of project technology”. 5. In the column ‘Source of data’: it is mentioned that ‘the CME has sourced the data for the parameter from manufacturer guarantee as per the provided confirmation letter’. Assessment team is unable to trace the manufacturer’s specification/manufacturer guarantee to confirm the expected technical life of project technology. ICS 5; Avoidance of double counting or double claiming among project participants: 6. In the column ‘Source of data’: As per the requirements of applied methodology, assessment team is not able to trace any evidence or written assertions for ownership rights signed between CME and any other project participant (ICS Manufacturer). For ICS 7; Regulatory framework for provision of thermal energy services:	

7. Assessment team could not trace the appropriate source of data for this parameter as per the applied methodology.

ICS 8; EF_{b,f,CO_2} , ICS 9; $EF_{b,f,nonCO_2}$, and ICS 11; $EF_{p,f,nonCO_2}$:

8. As per Section A.3 of VPA-DD as well as the observations made during remote interviews with beneficiaries of the project, the fuel utilized in the baseline scenario is solely firewood. The inclusion of charcoal as a data source for this parameter remains unclear to the assessment team.

ICS 18; $P_{b,y}$

9. In the column 'QA/QC procedures', it is mentioned that "*Compliance with the general requirements for sampling (Section 4.4), general requirements for QA/QC (Section 4.5) and Annex 2 Kitchen performance test*". It is not clear to assessment team which document is being directed here for section 4.4 and section 4.5.

Evidence

Monitoring Report; version 01 dated 30/11/2024

1st Response from PD

Date: 21-03-2025

Section D.1

ICS 1; Baseline scenario survey results:

1. Baseline report is Submitted as supporting document

ICS 2: Project technology description

2. Updated.
3. Supporting evidence is now submitted.
The Project developer has provided a description of common features of technology being implemented which are same for all the ICS.
Detailed technical specifications are provided in supporting document submitted for your kind review

ICS 3: Expected technical life of project technology

4. Accurate information is now updated.
5. Submitted as supporting document.

ICS 5; Avoidance of double counting or double claiming among project participants:

6. Agreement between both entities is now submitted as supporting document

For ICS 7; Regulatory framework for provision of thermal energy services:

7. Self-declaration by Project developer is now submitted as supporting document.

ICS 8; EF_{b,f,CO_2} , ICS 9; $EF_{b,f,nonCO_2}$, and ICS 11; $EF_{p,f,nonCO_2}$:

8. Table is now updated with firewood details

ICS 18; P_{b,y}

9. Table is now Updated

Documents provided by PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0
2. Self- Declaration
3. Baseline survey report

1st Review by Assessment Team

Date: 02/04/2025

Section D.1
ICS 1; Baseline scenario survey results:

1. Assessment team observes that PD has provided the baseline survey report. However, the baseline survey report is incomplete in nature. AT could not trace the date and version in the baseline survey report. The start and end dates of the baseline survey are also not found in the report. (open)

ICS 2: Project technology description

2. The data source has been clarified in for the parameter in the revised MR. PD has opted for the option 'Manufacturer specifications' for the source of data. **Hence, the comment is closed.**
3. Based on the manufacturer's specifications documents provided by PD, it is observed that the four ICS models vary in various aspects. However, it is not clear why the technical details are provided here combinedly for all the models. (open)

ICS 3: Expected technical life of project technology

4. The description of the parameter is still not appropriately mentioned in the MR. (open)
5. PD has provided the technical specifications document. However, as per the document, the lifespan of PC 100 and U100 is 5-6 years and for T100 and T500 is 6-7 years. The value(s) applied section is not updated. (open)

ICS 5; Avoidance of double counting or double claiming among project participants:

6. AT is still not able to trace any evidence for ownership rights signed between CME and ICS manufacturer. (open)

For ICS 7; Regulatory framework for provision of thermal energy services:

7. AT observed that PD has updated the table for the parameter and the appropriate source is now mentioned. However, AT is unable to trace the self-declaration as supporting evidence. (open)

ICS 8; EF_{b,f,CO_2} , ICS 9; $EF_{b,f,nonCO_2}$, and ICS 11; $EF_{p,f,nonCO_2}$:

8. It is observed that PD has updated the section and corrected the data source of the parameter. It is consistent with applied methodology. **Hence, the finding is closed.**

ICS 18; P_{b,y}

9. It is observed that PD has updated the parameter table and corrected the column 'QA/QC procedures'. It is now correct and in-line with the methodology. **Hence, the finding is closed.**

2nd Response from PP/PD

Date: 29/04/2025

ICS 1; Baseline scenario survey results:

1. PD updated the date and version in the baseline survey report. The start and end dates of the baseline survey are also mentioned in the report.

3. PD provided the manufacturer's specifications of all four ICS models separately.
4. The description of the parameter is now mentioned in the MR in ICS 3 of the MR.

Documents provided by PP/PD for review

1. Baseline survey Report
2. *PC 100 Summarized Tests Results on Thermal and Emission Power Stove _wood pellet_2 (1), U100, T500, T100*
3. MR

2nd Review by Assessment Team

Date: 25/06/2025

Section D.1

1. PD has now updated the date and version in the baseline survey report and has also mentioned the start and end dates of the baseline survey and it is found to be appropriate. **Hence, the finding is closed.**
3. PD has now provided technical specifications for all the four models separately and it is found to be appropriate. **Hence, the finding is closed.**
4. PD has updated the description of the parameter ICS 3: Expected technical life of project technology in the MR correctly. **Hence, the finding is closed.**

Finding 03 is closed.
Finding No. 04

Date: 07/03/2025

Finding Type- CAR ☐ CL ☒ FAR ☐
Stage of finding raised :

- | | |
|-----------------------------------|--------------------------|
| Desk Review | ☐ |
| On-site/remote/hybrid assessment | ☐ |
| Technical Review | ☐ |
| Project Review Report by Registry | ☐ |

Requirement

- GS4GG Programme of activity Requirements and Procedures; version 3.0
- GS4GG Principles & Requirements; version 2.1
- GS4GG Monitoring Report Template Guide; version 1.1
- Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2
- Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0

Non-Conformity

Section D.2

ICS 16: Presence of stove

1. Assessment team is not able to trace the evidence for usage survey conducted under the project to confirm whether there is any presence of stove stacking.

ICS 19; P_{p,y}

2. In the column 'QA/QC procedures', it is mentioned that "*Compliance with the general requirements for sampling (Section 4.4), general requirements for QA/QC (Section 4.5) and Annex 2 Kitchen performance test*". It is not clear to assessment team which document is being directed here for section 4.4 and section 4.5.

ICS 20; SFS_{b,p,y}

3. In the column 'QA/QC procedures', it is observed that project developer has simply mentioned that guidelines from the respective methodology. However, there is ambiguity regarding the details of QA/QC procedures.

ICS 26; U_{p,y}

4. Assessment team is not able to trace any reference for "Requirements and Guidelines: Usage Rate Monitoring".

5. In the column 'QA/QC procedures', it is mentioned that "*Compliance with the general requirements for sampling (Section 4.4) and general requirements for QA/QC (Section 4.5)*". It is not clear to assessment team which document is being directed here for section 4.4 and section 4.5.

ICS 27; N_{b,p,y}

6. In the column 'Source of data', it is mentioned that "*Calculated from the Project database (see section 3.4.B. Project database)*". However, assessment team cannot trace this section in the project database.

7. It is not clear to assessment team why the column 'Measurements methods and procedures' is left blank by the project developer.

SDG 3; N_{SDG 3} and SDG 5; N_{SDG 5}

8. As per the desk review of MR, the source of the data is 'Project Surveys'. However, it is not clear to assessment team which specific project survey is being conducted to monitor the parameter N_{SDG3} and N_{SDG5}.

SDG 8; N_{EP}

9. As per the desk review of MR, the source of data is 'Employees list'. However, assessment team is not able to trace the employees list and any supporting evidence to verify the employment of 20 employees under the project.

Section D.4

10. As per the requirements of MR Template guide, it is not demonstrated that the samples are randomly selected. Additionally, the dates of survey conducted in the project cannot be traced.

11. The AT is unable to trace any "sampling method and calculations" for monitoring parameters "except Up,y".

12. In this section of MR, the AT is unable to identify whether the mentioned sample size (39) was considered for the monitoring survey.

Additionally, the assessment team is unable to identify the outcome of the survey in the monitoring report.

Evidence

Monitoring Report; version 01 dated 30/11/2024

1st Response from PD

Date: 21-03-2025

Section D.2

ICS 16: Presence of stove

- Usage survey, integrated with monitoring survey is now submitted as supporting document

ICS 19; $P_{p,y}$

- Table is now updated.

ICS 20; $SFS_{b,p,y}$

- Table is now updated.

ICS 26; $U_{p,y}$

- Reference is now updated.
- Table is now updated.

ICS 27; $N_{b,p,y}$

- Updated in Ex-post ER Sheet Tab "Project Database".
- Updated.

SDG 3; $N_{SDG 3}$ and SDG 5; $N_{SDG 5}$

- Monitoring survey is used, submitted as supporting document.

SDG 8; N_{EP}

- Employee list is now submitted. Updated in Ex-post ER sheet as well

Section D.4

- Random sampling procedure is demonstrated in Monitoring sample sheet, submitted as supporting document.
- Updated in table
- Updated the section and applied sample size i.e. 128

Documents provided by PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0 2. GS-12944_Monitoring survey	
1 st Review by Assessment Team	Date: 02/04/2025
Section D.2 ICS 16: Presence of stove 1. PD has clarified that the usage survey is integrated with monitoring survey and is provided as a supporting document. Hence, the finding is closed. ICS 19; P_{p,y} 2. The table for the parameter P_{p,y} is now updated and is in-line with the applied methodology. Hence, the finding is closed. 3. ICS 26; U_{p,y} 4. Assessment team observed that PD has incorporated the reference for “Requirements and Guidelines: Usage Rate Monitoring”. The reference document is found to be correct. Hence, the finding is closed. 5. The column ‘QA/QC procedures’ for this parameter has been updated and the document name has been mentioned now. Hence, the finding is closed. ICS 27; N_{b,p,y} 6. The column ‘Source of data’ for the parameter N_{b,p,y} has been updated now in the revised MR. It is clarified that the parameter is calculated from Ex-post ER sheet. Hence, the finding is closed. 7. PD has updated the parameter table and clarified that the ‘Measurements methods and procedures’ is: “calculated from project database as per the installation dates of individual devices. Also, usage survey was conducted to assess the usage of ICS”. Hence, the finding is closed. SDG 3; N_{SDG 3} and SDG 5; N_{SDG 5} 8. PD has clarified that the source of the data is monitoring survey for SDG 3; N_{SDG 3} and SDG 5; N_{SDG 5}. However, the same is not mentioned in the parameter table. (open) SDG 8; N_{EP} 9. PD has provided the list of the employees. However, there is no evidence to confirm the employment of the given list of employees. (open) Section D.4 10. The dates of the survey is still cannot be traced in this section. (open) 11. PD has updated the section and clarified that the sample size considered for survey is 128. It is consistent with the monitoring survey data sheet. Hence, the finding is closed.	
2 nd Response from PP/PD	Date: 29/04/25
8. PD has mentioned the source of the data for SDG 3; N_{SDG 3} and SDG 5; N_{SDG 5}. In parameter table. SDG 8; N_{EP} 9. PD has provided the list of the employees along with salary slip.	
Documents provided by PP/PD for review	



1. MR 2. Salary Slip	
2nd Review by Assessment Team	Date: 25/06/2025
Section D.2 8. PD has now mentioned the source of the data for SDG 3; N_{SDG 3} and SDG 5; N_{SDG 5} . In parameter table. Hence, the finding is closed. 9. PD has now submitted the employment records along with the salary slip and it is found to be correct. Hence, the finding is closed. Finding 04 is closed.	

Finding No. 05	Date: 07/03/2025
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised : Desk Review ☐ On-site/remote/hybrid assessment ☐ Technical Review ☐ Project Review Report by Registry ☐	
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Section E.1 1. As per the MR Template Guide ‘ <i>Clearly reference the spreadsheets used (including sheet names as necessary) and supply them as supporting evidence to the monitoring report,</i> ’. However, the spreadsheets used are not referenced in this section. 2. Under the heading “Ex ante calculations related to the outcomes of SDG 13” in this section, Assessment team could not trace the vintage wise break down of years with start and dates for the remaining years (2024, 2025, 2026 and 2027). 3. The AT is unable to trace any evidence supporting the SDG Claim 3 (Health Project – Health Baseline = 97.66% - 0% = 97.66%). 4. The AT is unable to trace any evidence supporting the SDG Claim 5 (TProject - TBaseline = 95.31% - 0% = 95.31% of users)	
Section E.2	

5. In this section, Assessment team could not trace the vintage wise break down of years with start and dates for the remaining years (2024, 2025, 2026 and 2027). Moreover, in the table in this section, it is not clear to assessment whether the number of cookstoves mentioned (100,000) is the total cookstoves distributed in the VPA during the current monitoring period.

Section E.5.1

6. Section E.5.1 of the Monitoring Report (MR) is not demonstrated as per the requirements mentioned in the Template Guide v1.1 for the monitoring report.

Section G.1

7. Assessment team is not able to trace any evidence to confirm that no grievances have been raised by any beneficiary or stakeholder during the current monitoring period.

Evidence

Monitoring Report; version 01 dated 30/11/2024

1st Response from PD

Date: 21-03-2025

Section E.1

1. Spread sheets and other supporting documents are now submitted for your kind review
2. Updated.
3. Submitted Ex-post ER sheet and monitoring survey as supporting document.
4. Submitted Ex-post ER sheet and monitoring survey as supporting document.

Section E.2

5. Updated

Section E.5.1

6. Section E.5.1 is now updated.

Section G.1

7. Updated as per supporting document of grievance redressal. Supporting document is now submitted

Documents provided by PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0
2. Grievance mechanism

1st Review by Assessment Team

Date: 02/04/2025

Section E.1

1. PD has submitted the ER calculation spreadsheets as reference documents for this section of the MR. **Hence, the finding is closed.**
2. The vintage wise breakdown is still not provided for the years 2024 to 2027. (open)
3. PD has provided monitoring survey results sheet as reference documents. However, PD has only provided the 16 sample copies of survey forms to verify the survey results. AT is not able to confirm the survey results of the remaining samples. (open)
4. As per the Ex-post ER sheet, a few cells are left blank in the section “Does the beneficiary perceive time savings on fuel collection and cooking meals”. So, the AT is unable to confirm the claim of 95.31% for SDG 5. Also, the survey forms of all the surveyed households are not provided by the PD to confirm the results. (open).

Section E.2

5. PD has revised the number of ICS being implemented in the project in this section. However, the vintage wise breakdown of year is still not provided in the table. (open)

Section G.1

7. As per the grievance records provided, there are some grievances raised which fall under current monitoring period. The statement mentioned here “No issues have been raised by the beneficiaries during the respective monitoring period” is not consistent with grievance records provided. (open)

2nd Response from PP/PD

Date: 29/04/25

2. The vintage wise breakdown is provided for the years 2024 to 2027.
3. PD has now provided all sample copies of survey forms to verify the survey results.
4. PD updated the blank cells in the section “Does the beneficiary perceive time savings on fuel collection and cooking meals”.
5. PD has revised the vintage wise breakdown of year

Section G.1

7. PD ha updated the grievance records received in the MR

Documents provided by PP/PD for review

MR and Monitoring survey result

2nd Review by Assessment Team

Date: 25/06/2025

Section E.1

2. PD has now provided vintage wise breakdown for the years 2024 to 2027 and it is found to be appropriate. **Hence, the finding is closed.**
3. PD has now provided all sample copies of survey forms to verify the survey results and its is found to be correct. **Hence, the finding is closed.**

Section E.2

4. PD has now provided vintage wise breakdown for the years 2024 to 2027 and it is found to be appropriate. **Hence, the finding is closed.**

Section G.1

7. PD has updated the grievance records in the monitoring report and has submitted the evidence for the same and it is found to be correct. **Hence, the finding is closed.**

Finding 05 is closed.

Finding No. 06	Date: 07/03/2025
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised :	
Desk Review	☐
On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Key project information 1. During desk review, it is observed that the title of the VPA is not consistent with the GS VPA-DD Template Guide version 2.0. As per the template guide: <i>“Each real case VPA title must be prefixed with PoA GS ID that VPA is linked to. See example title below: - POA GS ID - VPA Number - VPA Title”.</i> 2. During desk review, it is observed that the duration of the monitoring period mentioned in this report is not consistent with the contract signed between Client and VVB. Moreover, it is unclear to the assessment team whether the duration of this monitoring period includes both dates. 3. AT identified that PD has not followed the guidelines demonstrated under section 8.3.8 of Programme of Activity Requirements and Procedures v2.1 for the column ‘Date of project design certification’. Table 1 - Sustainable Development Contributions Achieved 4. AT identified that the proportion of End users in % perceiving improved health conditions is not consistent with the monitoring survey database. Table 2- Product Vintages; 5. As per the GS MR Template Guide, the monitoring period in this table is not divided into calendar years and the achieved amounts are not accordingly mentioned. 6. AT unable to trace any evidences to verify the amount of VERs for current monitoring period.	

Section A.3

7. In this section, the link provided in the footnote for the applied methodology TPDDTEC is not directed to the required document i.e., TPDDTEC v4.0. It rather opens up the 'Usage Rate Monitoring' document.

Section A.4

8. As per the [GS Project webpage](#), the crediting period of the project is 01/07/2023 to 30/06/2028. There is inconsistency between this document and project webpage regarding the start and end date of crediting period.

Section B.1

9. During desk review, it is observed that the start date of VPA mentioned in this section of MR is not consistent with VPA-DD.

Section B.1.1

10. During desk review of MR, it is found that section B.1.1 is not updated as per the MR Template filling guidelines.

Section B.2

11. During desk review of MR, it is observed that the entire section B.2 of the Monitoring Report has not been updated as per the GS MR Template guide.

Evidence

Monitoring Report; version 01 dated 30/11/2024

1st Response from PD

Date: 21-03-2025

Key project information

1. Updated.
2. Updated
3. Updated.

Table 1 - Sustainable Development Contributions Achieved

4. Updated in line with the monitoring survey database.

Table 2- Product Vintages;

5. Updated.
6. Updated.

Section A.3

7. Link is updated.

Section A.4

8. Gold standard approved Pre-review request form is submitted as supporting evidence. Procedure to update the CP start date is initiated and updated CP will be reflected on website in due time.

Section B.1

9. Updated.

Section B.1.1

10. Updated.

Section B.2

11. Updated as per the GS MR Template guide.

Documents provided by PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0

1st Review by Assessment Team

Date: 02/04/2025

Key project information

1. It is observed that the title has been updated according to VPA-DD Template Guide version 2.3. **Hence, the finding is closed.**
2. The duration of monitoring period has been updated in the revised MR. it is consistent with the contract signed between Client and VVB. **Hence, the finding is closed.**
3. The section 'Date of project design certification' is now updated in the revised MR by the PD. It is now consistent with Programme of Activity Requirements and Procedures v2.1 requirements. **Hence, the finding is closed.**

Table 1 - Sustainable Development Contributions Achieved

4. The proportion of End users in % perceiving improved health conditions is now consistent with the monitoring survey database. This is confirmed by reviewing the revised MR and cross checking with the ER sheet. **Hence, the finding is closed.**

Table 2- Product Vintages;

5. The vintage wise breakdown of calendar years has been provided. However, the end date of monitoring period is not correctly mentioned. (open).
6. The values provided in this table of MR has been cross checked with the Ex-post ER sheet. The values are found to be consistent with the ER sheet. Hence, the findings is closed.

Section A.3

7. the link provided in this section has been updated. It is directed to the applied methodology TPDDTEC version 4.0. **hence, the finding is closed.**

Section A.4

8. PD has clarified that the request to update the CP on the project webpage has been made to the registry. PD has also submitted the approved pre-review request form and the email conversation between PD and registry for change of CP. However, the correct CP is still not reflected on the project webpage. (open)

Section B.1

9. The start date of VPA mentioned in this section of MR has been updated and it is also consistent with the VPA-DD. PD has also submitted the sample of end user agreement for initial distribution as supporting evidence. The start date is now correctly mentioned. **Hence, the finding is closed.**

Section B.1.1

10. PD has updated the section by mentioning the FAR raised by the registry. However, the stakeholder consultation report has not been provided to confirm the details. (open)

Section B.2

11. The section has been updated by the PD. It is now consistent with the requirements of GS MR Template guide. **Hence, the finding is closed.**

2nd Response from PP/PD

Date: 29/9/25

Table 2- Product Vintages;

5. The end date of monitoring period in vintage wise breakdown of calendar years has been provided.

Section A.4

8. PD has shared the request with GS to change the CP on the webpage.

Section B.1.1

The stakeholder consultation report has been provided to confirm the details.

Documents provided by PP/PD for review

1. MR
2. Email SS
3. LSC report

2nd Review by Assessment Team

Date: 25/06/2025

Table 2- Product Vintages;

5. PD has updated the date of monitoring period correctly in the monitoring report. **Hence, the finding is closed.**

Section A.4

8. PD has submitted the evidence for the response that they got from GS4GG registry regarding the change in the dates of the crediting period and it is found to be appropriate. **Hence, the finding is closed.**

Section B.1.1

10. PD has submitted the local stakeholder consultation report and it is found to be valid. **Hence, the finding is closed.**

Finding 06 is closed.

Finding No. 07

Date: 07/03/2025

Finding Type- CAR ☒

CL ☐

FAR ☐

Stage of finding raised :

Desk Review

☐

On-site/remote/hybrid assessment

☐

Technical Review	☐
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
1. Throughout section D.1 and D.2, it is observed by the assessment team that the column ‘Additional comment’ and ‘Choice of data or Measurement methods and procedures’ are not consistent with the applied methodology for the data/parameters. Section D.1 ICS 2: Project technology description 2. In this parameter, the section ‘Choice of data or measurement methods and procedures’ is not consistent with that mentioned in VPA-DD. Additionally, as per remote interviews conducted with project representatives, it was found that the manufacturer of project ICS is Powerstove, which is a separate entity. The statement “The CME is the manufacturer of the project technology” is inconsistent with remote observations. ICS 3: Expected technical life of project technology 3. During the desk review of MR, it is observed that the value of the parameter is not consistent with that mentioned in the VPA-DD. 4. During a remote inspection of the project activity, it was identified that Project Developer has its own manufacturing facility for cookstoves as well as for pellets. The statement mentioned here “<i>The CME is the manufacturer of the project technology</i>” is not consistent with the remote audit observations. 5. For this parameter, the project technology life span is not consistently mentioned in the table for this parameter. ICS 7; Regulatory framework for provision of thermal energy services 6. During desk review of MR, it is observed that the table for this parameter is not complete as per the MR Template. 7. It is observed during desk review that the appropriate source of data for this parameter is not mentioned as per the applied methodology. ICS 11: $EF_{p,f,nonCO2}$ 8. During desk review, assessment team found that the description for the parameter is not correctly mentioned, as per the applied methodology.	

ICS 17; $fNRB_{i,y}$

9. During desk review, it is observed that the parameter is not correctly mentioned. As per the methodology TPDDTEC, “*Determined ex-ante and fixed for a given crediting period (if it is fixed ex-ante, then include $fNRB_{b,y}$ in the “data and parameters fixed ex ante” section of the PDD)*”.

10. During desk review, it is observed that the value of the parameter is not consistent with that mentioned in VPA-DD and with Ex-post ER sheet.

ICS 18; $P_{b,y}$:

11. During desk review, it is observed that the source of data is not consistent with the applied methodology.

Section D.2
ICS 18; $P_{p,y}$:

12. During desk review, it is observed that the source of data is not consistent with the applied methodology.

Additionally, the value of this parameter is not consistent with VPA-DD.

Evidence

Monitoring Report; version 01 dated 30/11/2024

1st Response from PD

Date: 21-03-2025

1. Tables in section D1 & D2 are now updated in line with applicable methodology.

Section D.1
ICS 2: Project technology description

2. Updated.

ICS 3: Expected technical life of project technology

3. Updated.

4. Updated.

5. Updated in table.

ICS 7; Regulatory framework for provision of thermal energy services

6. Table is now updated as per the MR Template.

7. Appropriate source of data for this parameter is now mentioned as per the applied methodology.

ICS 11: $EF_{p,f,nonCO2}$

8. the description for the parameter is now updated as per the applied methodology.

ICS 17; $fNRB_{i,y}$

9. Updated.

10. Updated as per Ex-post ERR sheet.

ICS 18; $P_{b,y}$:

11. The source of data is now updated as per the applied methodology.

Section D.2

ICS 18; $P_{p,y}$:

12. Value is now updated

Documents provided by PD for review

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0

1st Review by Assessment Team

Date: 02/04/2025

1. The tables for parameter in section D.1 and D2 has been updated as per the requirements of template guide. it is also in line with the applied methodology. **Hence, the finding is closed.**

Section D.1

ICS 2: Project technology description

2. In this parameter, the section 'Choice of data or measurement methods and procedures' is now consistent with the VPA-DD. The statement is updated and it is also consistent with remote interviews. **Hence, the finding is closed.**

ICS 3: Expected technical life of project technology

3. As per the technical specification document, the lifespan of PC 100 and U100 is 5-6 years and for T100 and T500 is 6-7 years. The value(s) applied section is not updated. (open)

4. The statement in the parameter table has been updated. It is now consistent with remote interviews conducted with project developer. **Hence, the finding is closed.**

5. The project technology life span is now consistently mentioned in the parameter table. **Hence, the finding is closed.**

ICS 7: Regulatory framework for provision of thermal energy services

6. the table has been updated by the project developer in the revised MR. it is now consistent with the MR Template guidelines. **Hence, the finding is closed.**

7. PD has updated the source of the parameter. However, AT is unable to trace the self-declaration mentioned in the source of data as supporting evidence. (open)

ICS 11: $EF_{p,f,nonCO2}$

8. The description of the parameter has been updated. The description is now in-line with the applied methodology. **Hence, the finding is closed.**

ICS 17; $fNRB_{i,y}$

9. Based on the review of the revised MR, the parameter is still not correctly mentioned as per the methodology (open).

10. The value of the parameter has been updated in the parameter table and it is consistent with the VPA-DD and ex-post ER sheet. **Hence, the finding is closed.**

ICS 18; P_{b,y}:

11. The source of the parameter has been updated in the MR. it is now consistent with the applied methodology. **Hence, the finding is closed.**

Section D.2

ICS 18; P_{p,y}:

12. It is not clear to assessment team why PD has taken estimated values in the VPA-DD, when the surveys are already conducted and the actual values are available. (open).

2nd Response from PP/PD

Date: 29/04/25

ICS 3: Expected technical life of project technology

3. The values are now updated as per technical specification document, the lifespan of PC 100 and U100 is 5-6 years and for T100 and T500 is 6-7 years.

7. PD has updated the source of the parameter. The self-declaration now shared as the source of data as supporting evidence.

ICS 17; fNRB_{i,y}

9. Based on the review of the revised MR, the parameter is now correctly mentioned as per the methodology

Section D.2

ICS 18; P_{p,y}:

12. PD has updated estimated values in the VPA-DD,

Documents provided by PP/PD for review

1. MR
2. Self declaration
3. VPA DD

2nd Review by Assessment Team

Date: 25/06/2025

3. PD has now updated as per technical specification document, the lifespan of PC 100 and U100 is 5-6 years and for T100 and T500 is 6-7 years and it is found to be correct. **Hence, the finding is closed.**

7. PD has now submitted the self-declaration and it is found to be correct. **Hence, the finding is closed.**

9. PD has updated the parameters correctly in the monitoring report. **Hence, the finding is closed.**

12. PD has correctly updated the values in the VPA-DD. **Hence, the finding is closed.**

Finding 07 is closed.

Finding No. 08

Date: 07/03/2025

Finding Type- CAR ☒

CL ☐

FAR ☐

Stage of finding raised :

Desk Review

☐



On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Gold Standard for the Global Goals Community Services Activity Requirements; version 1.2 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Section D.4 1. It is observed during desk review that the total sum of strata sample size is incorrectly mentioned in this section of MR. Section E.1 2. The statement “<i>traditional mud stoves previously used in the project area</i>” is incomplete, as the baseline survey data includes not just mud stoves but also three-stone stoves and other traditional solid fuel devices in the baseline scenario. 3. In the table “Ex ante calculations related to the outcomes of SDG 13 Emission reductions”, the units for ‘Baseline estimate, project estimate and net benefit’ units are not mentioned. Section E.5 4. As per the desk review of MR, it is observed that in this section, the estimated ex-ante value of SDG 13 for the current monitoring period is not correctly calculated.	
Evidence	
Monitoring Report; version 01 dated 30/11/2024	
1st Response from PD	Date: 21-03-2025
Section D.4 1. Whole section is now revised and updated. Section E.1 2. Updated. 3. Updated. Section E.5 4. Updated as per Ex-ante ER sheet.	
Documents provided by PD for review	

1. GS12944 Monitoring-Report ICS NIGERIA_v2.0	
1st Review by Assessment Team	Date: 02/04/2025
Section D.4 1. The value has been corrected as per the stratified sampling method in this section of revised MR. Hence, the finding is closed. Section E.1 2. The statement regarding the baseline stoves has been updated in this section of the revised MR. it is now consistent with the baseline survey data sheet. Hence, the finding is closed. 3. PD has updated the table “Ex ante calculations related to the outcomes of SDG 13 Emission reductions” and the correct units are now mentioned. Hence, the finding is closed. Section E.5 4. The value is still not correctly calculated. Also, AT is unable to trace any evidence to confirm this value. (open)	
2nd Response from PP/PD	Date: 29/04/25
Section E.5 4. The values are now correctly calculated.	
Documents provided by PP/PD for review	
MR	
2nd Review by Assessment Team	Date: <i>Mention date review of Submission here</i>
Section E.5 4. PD has now correctly updated the estimated ex-ante value of SDG 13 for the current monitoring period. Hence, the finding is closed. Finding 08 is closed	

Finding No. 09	Date: 27/06/2025
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised : Desk Review ☐ On-site/remote/hybrid assessment ☐ Technical Review ☒ Project Review Report by Registry ☐	
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	

Non-Conformity	
Section A.1 & D.1 1. In these sections of the Monitoring Report, there is no mention of changed fuel in the project scenario. 2. PD has not mentioned ER calculation procedure /equations in the Monitoring Report. In the Ex-post ER Sheet 3. Why the value of ER achieved/day is not linked with Method3-NFF tab in the ex-post ER Sheet?	
Evidence	
Monitoring Report version 4.0, Dated: 25/06/2025 Ex-post ER sheet	
1st Response from PD	Date: 27/06/25
Section A.1 & D.1 1. In these sections of the Monitoring Report, PD mentioned fuel in the both project and baseline scenario. 2. PD has now mentioned ER calculation procedure /equations in the Monitoring Report. In the Ex-post ER Sheet 3. ER achieved/day is now linked with Method3-NFF tab in the ex-post ER Sheet in Project Database sheet in column O to P and made consistent as per the methodology.	
Documents provided by PD for review	
1. MR 2. MR 3. Ex Post	
1st Review by Assessment Team	Date: 28/06/2025
Section A.1 & D.1 1. PD has updated the section correctly in the Monitoring report and has added the information regarding the fuel used in the baseline as well as the project scenario. Hence, the finding is closed. 2. PD has now mentioned ER calculation procedure /equations in the Monitoring Report and it is found to be appropriate. Hence, the finding is closed. In the Ex-post ER Sheet 3. PD has now linked ER achieved/day with Method 3-NFF tab in the ex-post ER Sheet in Project Database sheet in column O to P and made consistent as per the methodology. Hence, the finding is closed. Finding 09 is closed	

Finding No. 10	Date: 27/06/2025
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised :	
Desk Review	☐
On-site/remote/hybrid assessment	☐
Technical Review	☒
Project Review Report by Registry	☐
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Section D.2 and Ex-post ER sheet 1. In ER sheet the value of U_{py} is taken as 100%, however in the monitoring report it is mentioned as 90%. In Ex-post ER Sheet 1. In cel C3 of the ex-post ER sheet, cell value is not appearing. In PKPT sheet 1. Checking for outliers as per step 8 of the Annex-2 of the methodology has not been carried out. 2. Formula used for Outlier Threshold (lower) value is not as per applied methodology TPDDTEC version 4.0.	
Evidence	
Monitoring Report version 4.0, Dated: 25/06/2025 Ex-post ER Sheet	
1st Response from PD	Date: 27/06/25
Section D.2 and Ex-post ER sheet 1. In ER sheet the value of U_{py} is now updated to 90%, in aligned with monitoring report it is mentioned as 90%. In Ex-post ER Sheet 1. In cel C3 of the ex-post ER sheet, cell value is now appearing. In PKPT sheet 1. Checking for outliers as per step 8 of the Annex-2 of the methodology is explained in PKpT. 2. Formula used for Outlier Threshold (lower) value is now made consistent as per applied methodology TPDDTEC version 4.0.	

Documents provided by PD for review	
1. ER Sheet 2. ER sheet 3. PKPT	
1st Review by Assessment Team	Date: 28/06/2025
Section D.2 and Ex-post ER sheet 1. The PD has updated the value of U_{py} and now it is consistent with the monitoring report. Hence, the finding is closed. In Ex-post ER Sheet 2. PD has updated the value in the ER sheet and it is found to be correct. Hence, the finding is closed. In PKPT sheet 3. The PD has updated the formula used to calculate outlier threshold (lower) correctly in the PKPT sheet. Finding 10 is closed	

Finding No. 11	Date: 10/12/2025
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised : Desk Review ☐ On-site/remote/hybrid assessment ☐ Technical Review ☐ Project Review Report by Registry ☒	
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Table 2- Product Vintages 1. PD has not followed MR template guidelines while filling the table. Section D- Data and Parameters 2. The ex-ante and monitored parameters are not in line with the relevant comments from the ongoing design certification.	

3. PD has not formatted the table for ICS 2 correctly.
4. The value of the fNRB is not consistent with the revised documents of the ongoing design certification for the Real Case VPA.

Section E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

5. The date of Monitoring Period is inconsistent throughout the MR.

Ex-Post ER Sheet

6. Sample size is not consistent with the MR and with the sub sheets of the Ex-post ER Sheet.

Evidence

Monitoring Report version 5.0, Dated: 27/06/2025

1. The Assessment team is unable to locate the date of design certification

Ex-post ER Sheet.

1st Response from PD

Date: 02-01-2026

1. PD has now updated Table 02 in MR as per template guide
2. The ex-ante and monitored parameters are now updated.
3. The ICS-02 parameter table is now updated.
4. The value of the fNRB is now updated.
5. The date of Monitoring Period is now updated throughout the MR.
6. Sample size is now updated in the Ex-post ER Sheet. The consistent value is 128.

Documents provided by PP/PD for review

1. Ex_PostER_GS12944 – Final
2. GS12944 MR v6.0 - Final

1st Review by Assessment Team

Date: 14/01/2025

Table 2- Product Vintages

1. PD has updated the table and now it is found to be in compliance with the MR template guidelines. **Hence, the finding is closed.**

Section D- Data and Parameters

2. PD has updated the ex-ante and monitored parameters in accordance with the relevant comments from the ongoing design certification. **Hence, the finding is closed.**
3. The table for parameter ICS 02 has been updated by the PD and it is found to be in compliance with the MR template guidelines. **Hence, the finding is closed.**
4. PD has updated the value of fNRB and it is found to be consistent with the revised documents of the ongoing design certification for the Real Case VPA. **Hence, the finding is closed.**

Section E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

5. PD has corrected the date of monitoring period and it is found to be consistent throughout the MR. **Hence, the finding is closed.**

Ex-Post ER Sheet

6. PD has corrected the sample size in the ER Sheet and it is now found to be consistent with the MR and throughout the ER Sheet. **Hence, the finding is closed.**

Finding 11 is closed.

Finding No. 12	Date: 10/12/2025
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised :	
Desk Review	☐
On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☒
Requirement	
- GS4GG Programme of activity Requirements and Procedures; version 3.0 - GS4GG Principles & Requirements; version 2.1 - GS4GG Monitoring Report Template Guide; version 1.1 - Reduced Emissions from Cooking and Heating: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) – version 04.0	
Non-Conformity	
Section D- Data and Parameters - PD has not clarified the approach used for sample selection for each ICS model. - The QA/QC procedure for parameter $U_{p,y}$ is not sufficiently elaborated. Section D.4. Implementation of sampling plan - The Assessment team is unable to trace any justification in the monitoring report for choosing the different sample sizes for each type of stove from the above sample calculation (in section D4 of VPA-DD). Section G. Stakeholder Inputs and Legal Disputes - The Assessment team is unable to trace the date of issue raised and duration required to resolution of the issue.	
Evidence	
Monitoring Report version 5.0, Dated: 27/06/2025	
1st Response from PD	Date: 02/01/2026
- PD has applied simple random sampling method as per the guidance provided in applied methodology TPDDTEC v4.0. PD has also cross-checked the number of samples derived through stratified sampling method, applied as per CDM sampling guidelines and demonstrated in “Section D.4. Implementation of sampling plan” of monitoring report. Justification for adopting random sampling is provided in section D.4 of MR, for your kind review. - QA/QC procedures followed for parameter ICS 26 is now updated in the parameter table section.	

3. PD has now updated justification for choosing the different sample sizes for each type of stove derived through stratified sampling method, applied as per CDM sampling guidelines and demonstrated in “Section D.4. Implementation of sampling plan” of monitoring report, for your kind review. 4. PD has updated MR and additionally submitted supporting document with details of grievances received and their respective resolutions.	
Documents provided by PD for review	
1. GS12944 MR v6.0 – Final 2. Grievance register snapshots	
1st Review by Assessment Team	Date: 14/01/2025
Section D- Data and Parameters 1. PD has now clarified that they have applied random sampling method as per the guidance provided in applied methodology TPDDTEC v4.0. and it is found to be appropriate. Hence, the finding is closed. 2. PD has updated the QA/QC procedure for the parameter ICS 26 in the MR and it is found to be in compliance with the applied methodology. Hence, the finding is closed. Section D.4. Implementation of sampling plan 3. PD has updated the justification for choosing the different sample sizes for each type of stove in the MR and it is found to be appropriate and in compliance with the methodology. Hence, the finding is closed. Section G. Stakeholder Inputs and Legal Disputes 4. PD has updated the information in the MR and has also provided supporting evidence to verify the same and it is found to be appropriate. Hence, the finding is closed. Finding 12 is closed.	

Declaration

All CARs, CLs, and FARs from the Verification

Total Number of CAR s	06	Total Number of CLs s	06	Total Number of FAR s	00
Status of CARs	☐ Open ☒ Closed ☐ Turned to a FAR	Status of CLs	☐ Open ☒ Closed ☐ Turned to a FAR	Status of FARs	☐ Open ☐ Closed ☐ Turned to a FAR

7. COMPETENCE OF VERIFICATION TEAM AND TECHNICAL REVIEWERS

Team Leader- Barun Kumar



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Barun Kumar
Nationality	Indian
Countries of Experience	India, South Africa, Kenya, Uganda, DR Congo, Zambia, Madagascar, Fiji, Egypt, Singapore
Educational Qualification	B.Sc. (Environmental Science and Water Management) M.Sc. (Ecology & Environmental Sciences)
Year of Experience	13 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	SS 1 – TA 1.2 - Renewables SS 3 – TA 3.1 – Energy Demand SS 6 – TA 6.1 – Construction SS 7 – TA 7.1 – Transport SS 13 – TA 13.1 – Solid waste and wastewater SS 14 – TA 14.1 – Forestry He is a GS Approved Auditor

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	YES
Technical Reviewer	YES
Local Expert (India)	YES
TA Expert (1.2, 3.1, 6.1, 7.1, 13.1, 14.1)	YES
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	12/09/2024
Approved by	Dr. Vikas Kumar Aharwal (Founder & Director)	Date	12/09/2024

**Validator/Verifier-** Anil Dhankar

Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Anil Dhankar
Nationality	Indian
Countries of Experience	India
Educational Qualification	B.Sc. (Botany, Chemistry, Zoology) M.Sc. (Environmental Science)
Year of Experience	2 Years
Area of Expertise	Climate Change & Environment/Industry
Eligible Sectoral Scope	He is a GS Approved Auditor

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	12/09/2024
Approved by	Barun Kumar (Technical Manager)	Date	12/09/2024

**Validator/Verifier Trainee- Megha Modi****COMPETENCE STATEMENT**

Name	Megha Modi
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. Biotechnology (Hons) M.Sc. Biotechnology
Year of Experience	10 Months
Area of Expertise	NA
Eligible Sectoral Scope	NA

Roles

Project Trainee	NO
Validator/Verifier Trainee	YES
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	23/07/2024
Approved by	Barun Kumar (Technical Manager)	Date	23/07/2024

**Project Trainee-Swati Vats**

Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Swati Vats
Nationality	Indian
Countries of Experience	India
Educational Qualification	B.Sc. (Hons.) in Forestry M.Sc. in Environmental Science
Year of Experience	Fresher
Area of Expertise	NA
Eligible Sectoral Scope	NA

Roles

Project Trainee	YES
Validator/Verifier Trainee	NO
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (<i>Country Wise</i>)	NO
TA Expert (<i>XX</i>)	NO
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	02.08.2024
Approved by	Barun Kumar (Technical Manager)	Date	02.08.2024

Technical Reviewer- Sunil Kathuria



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Sunil Kathuria
Nationality	Indian
Countries of Experience	Malaysia, Uganda, Kenya, South Africa, Nigeria, Bangladesh, China, Vietnam, Thailand, Philippines, United Kingdom, Germany, USA
Educational Qualification	B.E. (Electrical Power)
Year of Experience	40 Years
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	SS 1 – TA 1.1 – Thermal energy generation SS 1 – TA 1.2 – Renewables SS 2 – TA 2.1 - Energy distribution SS 3 – TA 3.1 - Energy Demand SS 4 – TA 4.1 – Cement and lime production (Manufacturing Industries) SS 13 – TA 13.1 Solid Waste & Wastewater He is a GS Approved Auditor

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	YES
Technical Reviewer	YES
Local Expert (India)	YES
TA Expert (1.1, 1.2, 2.1, 3.1, 4.1, 13.1)	YES
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	12/09/2024
Approved by	Barun Kumar (Technical Manager)	Date	12/09/2024

APPENDIX 01: TECHNICAL DETAILS OF ICS

Component Stove Type: U100, T100, PC100, T500	Minimum Standard Requirements	Means of verification	Comments/remarks
Outer body	≥ 1 mm thick mild steel or galvanized, stainless steel	By inspection and measurement Powerstove Ure Model sample	1 mm light metal sheet (outer body and top outer body made of stainless sheet with pot stand). The stove outer body painted red, but still needs some good finishing. - sharp edges observed, pot sitters not uniform, stove stand to be raised at least 20 mm from the ground.
Combustion Chamber	≥ 1 mm thick stainless steel/ mild steel/ ≤ 20 mm fired clay		Made of perforated metal sheet for proper air distributions in the combustion chamber and divergence shape for proper heat spread
Provision for air inlet	durable grate or holes	By measurement	20 mm diameter air inlet door (primary). Secondary air inlet with 10 holes, diameter, 20 mm distributed round the stove body 10 mm from the stove stand.
Insulation material	Rock wool/ceramic fiber	By inspection	Air gap of 6 cm is provided between the combustion chamber inner wall and stove outer wall as means of insulation
Top with pot stand	≤ 10 mm high cast iron/thick mild steel/ stainless steel	By inspection and measurement	Height of pot stands not uniform, 20 mm high. Reduce it to about 12mm
Handles or hand grip	Non-metallic or insulated material and can withstand high temperature of outer body	By measurement with digital thermometer UT321	Metallic handle painted red and withstand high outer body temperature
Fuel type	Wood pellets, Firewood	By visual inspection	fuel is provided for free at regular intervals on the basis of average consumption of households.

History of the Document

Version	Date	Amendment Summary*	Prepared By	Approved By
3.1	14.09.2024	Duplicacy of executive summary and table is removed from section 1	Apoorva Gupta	Dr. Vikas Kumar Aharwal
3.0	21/05/2024	Signature of TR added as approver	Apoorva Gupta	Dr. Vikas Kumar Aharwal
2.1	23/04/2024	Change in VKU address at front page	Apoorva Gupta	Dr. Vikas Kumar Aharwal
2.0	28/08/2023	Revisions done in all sections as per the requirement of GS4GG Standard	Vandana Gupta	Dr. Vikas Kumar Aharwal
1.1	22/07/2021	NA	Ayushi Garg	Vikas Aharwal
1.0	17/03/2020	NA	Ayushi Garg	NA

*Amendment Summary adopted in VKU System on 12.10.2022