Verification and certification report for GS project activities

BASIC INFORMATION	
Title and UNFCCC reference number of the project activity	Burn Stoves Project in Kenya (GS 5642)
Scale of the project activity	☒ Large-scale ☐ Small-scale
Version number of the verification and certification report	06
Completion date of the verification and certification report	01/03/2021
Monitoring period number and duration of this monitoring period	MP-2 of crediting period 2 01/10/2018 to 31/05/2020 (both days included)
Version number of the monitoring report to which this report applies	04
Crediting period of the project activity corresponding to this monitoring period	2nd Crediting Period 26/04/2017 to 25/04/2024 (Including both days)
Project participants	Burn Manufacturing Limited
Project representative(s)	ClimateCare Limited
Host Party	Kenya
Applied methodologies and standardized baselines	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC); Version 3.1.0
Mandatory sectoral scopes	01, 03 and 13
Conditional sectoral scopes, if applicable	-
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	1, 322,388 tCO2e
Certified amount of GHG emission reductions or GHG removals for this monitoring period	462,795 tCO2e
SDG Impacts:	• SDG 1: End poverty in all its forms everywhere • SDG 3: Ensure healthy lives and promote well-being for all at all ages • SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all • SDG 13: Climate Action

Name and UNFCCC reference number of the DOE	E-0052: Carbon Check (India) Private Ltd.
Name, position and signature of the approver of the verification and certification report	Amit Anand, CEO 

SECTION A. Executive summary

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The Project Participant, Burn Manufacturing Limited has appointed the Validation & verification body (VVB), Carbon Check (India) Private Ltd. (CCIPL) to perform second (2^{nd}))verification (of 2^{nd} crediting period) of the GS Project Activity "Burn Stoves Project in Kenya" in Kenya (hereafter referred to as "Project Activity"). The objective of the Burn Stoves Project in Kenya is to improve health and incomes throughout Kenya by reducing time and money spent acquiring fuel for household cooking. The project stoves are expected to replace the inefficient traditional stoves used in the baseline. As a result, the project results in reductions of CO_2 emissions that are real, measurable and gives long-term benefits to the mitigation of climate change.

This report summarises the findings of the verification of the project, performed on the basis of Gold standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the Gold Standard. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with request for issuance of ERs. This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions.

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Validation & verification body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period.

Certification is the written assurance by a Validation & verification body (VVB) that, during a specific period, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the "Burn Stoves Project in Kenya" in the host country "Kenya" for the period 01/10/2018 to 31/05/2020 (including both the days).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. CCIPL's objective is to perform a thorough, independent assessment of the registered project activity.

In particular, the monitoring plan, monitoring report and the project's compliance with relevant GS and host Party criteria are verified in order to confirm that the component project/s has/have been implemented in accordance with the previously registered project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered/revised PDD and the approved monitoring methodology.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered PDD /B03/
- To verify the implemented monitoring plan with the registered PDD /B03/ and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

Verification process:

The verification comprises a review of the monitoring report over the monitoring period from 01/10/2018 to 31/05/2020 and based on the registered PDD /B03/ in part of the monitoring parameters and monitoring plan, emission reduction calculation spreadsheet, monitoring methodology and all related evidence provided by project participant.

Document review and remote interviews are also performed as part of the verification process.

Conclusion:

The verification team assigned by the Validation & verification body (VVB) concludes that the monitoring report (Version 04 dated 01/03/2021) /01-b/, meet all relevant requirements of the Gold Standard as per the requirements of GS4GG. The verification has been conducted in-line with the GS4GG requirements.

The project activity was correctly implemented according to the selected monitoring methodology, monitoring plan and the registered PDD/B03/. The monitoring system was implemented, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the document review and remote interviews, the verification team confirms that the project activity has resulted in the 462,795 tCO_2e SDG impact (as per approved methodology) achieved in this monitoring period.

CCIPL as a Validation & verification body (VVB) is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	Remote intetview	Interviews	Verification findings
1.	Team Leader / Verifier / Technical Expert	IR	Singh	Vikash Kumar	CCIPL	X	X	X	X
2.	Trainee Assessor	IR	Suman	Priya	CCIPL	X	X		X
2.	Local Expert	ER	Muruiki	Job	CCIPL		X	X	

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Anand	Amit	CCIPL
2.	Approver	IR	Anand	Amit	CCIPL

Audit Team Experience:
The team composition is linked to the methodology and local experience in the host country.

Vikash Kumar Singh: Qualified lead assessor and internal technical reviewer for offset projects validations and verifications under CDM, VCS and Gold Standard (GS) and actively been involved in the validation and verification or internal technical review of more than 200 GHG offset projects. He is qualified as technical expert for TA 1.2, 3.1,4.1,13.1 and 13.2 under CDM SS categorisation. He has undergone extensive training in the validation and verification of carbon offset projects including the accreditation requirements for the VVBs. He has also received accreditation from the California Air Resources Board (ARB) under Executive Order H2-13-174 as a GHG offset lead verifier for carbon offsets projects and is a specialist for the livestock protocol. Currently, he is employed with Carbon Check in the capacity of Compliance Officer. He holds a Bachelor of Science degree in Environment & Water Management and Master of Science degree in Environmental Management. He has been involved in number of GS validation and verification projects (as internal technical reviewer and team leader) for e.g. Up Energy's Improved Cookstove Carbon Project, Uganda with GS reference number GS 1044 , Dissemination of Fuel Efficient Biomass Stoves and Water Purification Systems in Tanzania with GS reference number GS 850. He has also attended Several

Gold Standard DOE webinar training and also webinar on GS4GG and passed the online examination under GS4GG. He was also involved as validation and verification assessor in the following Gold Standard Projects: GS 1078, GS 1044, GS 976, GS 850, GS 916 PoA (GS 1231 (VPA 01) GS 1029 (VPA 02), GS 1030(VPA 03), GS 1031(VPA 04) and GS 4364. Vikash has extensive work experience on working in GS,CDM and VCS projects in East Africa, and Central Africa particularly in Uganda, Rwanda and Kenya.

Priya Suman: Priya has done B.Sc. in Environment & water management and M.Sc. in Environment Science. Priya is working with CCIPL and has undergone trainings on Accreditation standard, Accreditation Procedure and requirements as well as knowledge of CDM Project cycle and validation and verification standard. Priya is also qualified as Lead Auditor for ISO 9001:2015 Standard by TÜV SÜD South Asia Pvt. Ltd., ISO 14064: 2006 from CII and ISO 14001:2015 from Bureau Veritas. Priya has undergone training on Quality Management System and understanding of the companies QMS policy and documentation, aims, objectives and ethos of the company.
Job Muruiki: Is an appointed Local Expert for Kenya. He has been involved as a local expert in number of CDM and Gold Standard projects in Kenya.

Amit Anand: Qualified lead assessor and internal technical reviewer for offset projects validations and verifications under CDM, VCS and Gold Standard (GS) and actively been involved in the validation and verification or internal technical review of more than 200 offset projects. He is qualified as technical expert for TA 1.1, 1.2, 3.1, 8.1, 13.1 and 14.1 under CDM Sectoral Scope categorisation. He has a professional experience of more than 12 years in various capacities with organization like MITCON, TUV Rheinland, Deloitte and MGM International in the development and validation/verification of carbon off-set projects under different market based mechanism. He was also involved in validation and verification the following Gold Standard Projects: GS 1078, GS 976, GS 850, and GS 916 PoA (GS 1231 (VPA 01) GS 1029 (VPA 02), GS 1030(VPA 03), GS 1031(VPA 04).

SECTION C. Means of verification

C.1. Desk/document review

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The verification was performed primarily based on the review of the Monitoring report /01/ and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

N/A, since no on site inspection has been conducted for the verification of project activity

Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	--	--	--	--
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C.3. Interviews

On-site inspection has not been conducted for the verification of project activity due to travel restrictions imposed due to COVID-19 pandemic.

Regarding Gold standard requirements and in the view of current situations where travel restrictions have been put in place for domestic as well as international travel around the world due to COVID-19 pandemic, the VVB has decided to conduct the verification remotely (without on-site inspection) for the project in accordance with the provisions of paragraph 4.1.1. (b) of Rule Update: COVID 19: Interim Measures, which states:

"*If site visit cannot be postponed due to significant impact of delaying the site visit on VVB and/or project developer due to timeline/commitment as per validation/verification or GS-VERs delivery agreement, VVB may replace mandatory on-site visits with remote audits. The audit may include but not limited to validation, verification, the inclusion of VPAs, design change review etc.*"

The alternative means used for the validation is remote interviews as well as document reviews. In opinion of CCIPL, the alternative means used are justified and they are sufficient for the purpose of verification.

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1	Chris	McKinney	Burn Manufacturing	23/10/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Priya Suman, Job Muriuki
2.	Njihia	Samuel	Burn Manufacturing	23/10/2020	Project operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Priya Suman, Job Muriuki
3.	Stove S.No	111576585 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
4.	Stove S.No	301143153 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
5.	Stove S.No	301742787 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
6.	Stove S.No	301135985 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki

7.	Stove S.No	302296946 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
8.	Stove S.No	302315476 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
9.	Stove S.No	133403880 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
10.	Stove S.No	12622958 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
11.	Stove S.No	127910378 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
12.	Stove S.No	133390666 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
12.	Stove S.No	127555298 Year 1	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
13.	Stove S.No	105294628 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
14.	Stove S.No	104269391 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
15.	Stove S.No	105995308 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
16.	Stove S.No	1092585990 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
17.		110698646 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki

18.	Stove S.No	110335416 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
19.	Stove S.No	109598947 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
20.	Stove S.No	109015900 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
21.	Stove S.No	111575008 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
22.	Stove S.No	107625212 Year 2	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
23.	Stove S.No	2337022783 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
24.	Stove S.No	2407591349 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
25.	Stove S.No	2258853561 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
26.	Stove S.No	2281762150 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
27.	Stove S.No	33891087434 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
28.	Stove S.No	2671895925 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
29.	Stove S.No	2257119759 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki

30.	Stove S.No	2177137206 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
31.	Stove S.No	2633744863 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
32.	Stove S.No	2808616069 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
33.	Stove S.No	2811201163 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki
34.	Stove S.No	3249121964 Year 3	End-user	23/10/2020	Stove functionality, Number of eaters, Number of meals cooked, use of baseline stove, Frequency of use of baseline stove (if applicable), Number of meals cooked on baseline stove	Vikash Kumar Singh, Priya Suman, Job Muriuki

C.4. Sampling approach

VVB has used sampling during verification for checking the Usage Survey and Impact Parameters
Considering the sampling standard (version 08.0) /B07/, a sample size for 11 households were chosen (with no non-responses) for the project activity. A sample size of 11 was required, based on an AQL of 0.5 % and UQL of 20 %, the producer risk used is 10 % and consumer risk used was 20 %. Acceptance number (c) thus determined for the sample is 0.

Verification team for its acceptance sampling has opted 33 sample i.e.,11 samples for each age group. To get these 33 samples, Verification team has chosen 45 random samples i.e. 15 samples for each of the age-group. The additional 4 samples is to cover any non-response. Random stoves chosen by verification team for acceptance sampling were as below:

1. Year 1: Stove serial number- 2843358190, 109307684, 111576585, 301143153, 301742787, 301135985, 302296946, 127910378, 302315476, 133403880, 126229258, 133390666, 127555298, 132299026,132202138

2. Year 2: Stove serial number- 106659692, 111575008, 109015900, 110335416, 110698646, 109598947,109258990, 105995308, 106414179, 2434154287, 104269391, 107625212, 107002836, 105294628,102391490

3. Year 3: Stove serial number-2096454236, 2177137206, 2337022783, 2407591349, 2257119759,2671895928, 2678855860, 2808616069, 2588535561, 3241426557, 3467349275, 2281762150,3496287844, 3389107434, 2633744863

Out of these samples, verification team could not get few of the respondents at home and hence they were considered non-response. Verification team there after randomly selected additional samples to meet the sample size of 33. The details of the sample interviewed are listed in section C.3 (under the list of interviewed person). No discrepancy was found in any of the samples and thus c=0, i.e. no discrepant records were observed. Thus, PP's set of records has been accepted in line with §32 of the sampling standard (version 08.0) /B07/. For the impact parameters questionnaire were prepared and was used during the survey by the PP. Verification team has cross verified these sample documents during the remote interview.

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

The VVB has raised 01 clarifications and 05 corrective action requests and 03 Forward Action Request during this periodic verification.

SECTION D. Verification findings

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

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There were three (03) forward action requests from the previous verification.

FAR ID-01
As per the GS performance review of the previous monitoring period, there was a FAR; Forward Action Request # 1: PP is requested to follow the updated requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices for the subsequent MP.
VVB explanation as to how the FARs have been addressed: The PP was required to make 100% household visits during the surveys to interview households. However, this was not possible due to COVID-19 pandemic and to address this FAR. The PP has applied the maximum recommended rate of 75% which was also applied in the last monitoring period. PP shall follow the updated requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices for the subsequent MP.

FAR ID-02
FAR from previous verification report: Per Annex 4 §1, consider next time to give subjects enough time to be acquainted with the project stove especially for the non-users KCJ ones only before launching the PFT. The subjects did not mention this.
VVB explanation as to how the FARs have been addressed: This FAR could not be addressed because the project did not carry out a new KT due to COVID-19 pandemic. Instead, the project requested the GS for approval to apply the results of the previous KT survey and the GS granted the approval on 13/07/2020. The FAR shall be addressed in the next monitoring period when the project will undertake a new KT.

FAR ID-03
FAR from previous verification report: The PP shall include the relevant questions during surveys for all SD indicators and SDGs including the Perception of Air Quality. In the registered monitoring plan, the PP intends to conduct “Baseline Surveys‟ while in the latest PDD it will be through “Survey‟ for this and most other SDGs. The Baseline Surveys are defined separately from the BFT in the applied methodology. Not clear whether these “Surveys‟ are part of the KPT Studies or standalone Surveys. Two of the SD indicators in the registered passport explicitly mention KPT studies as the way of monitoring while the SD10 is through project training records. A clear MP for SDI/SDGs shall be followed

VVB explanation as to how the FARs have been addressed:

As per MR, although the project passport states that surveys were to be carried out during KT surveys. However, the project do carry different surveys on project impacts and as such, the SDG determination is carried together with these surveys. Instead, the project carries out project impact measurement through surveys using third parties and it is through these studies that the project identifies the project impacts on the applicable SDGs.

The above surveys which were carried during this monitoring period were stand-alone surveys and not KPT surveys. The survey questions were modified to collect the relevant information required and these surveys capture more data and not only SDG data as per the passport. As per the VVB, this is deemed appropriate to determining the project impacts since the surveys are stand alone and designed to capture other project impacts which are relevant to overall project sustainability.

Please refer to appendix 4 of this report for the further details on the FAR.

D.2. Compliance of the project implementation and operation with the registered project design document

Means of verification	Document Review, Remote Interview
Findings	--
Conclusion	CCIPL by means of document review and remote interview, assessed that all the features (technology, project equipment and monitoring) of the registered PDD /B03/ are in place and that the project participants have operated the project as per the registered/ PDD /B03/. The location of the project activity is clearly defined in the registered PDD /B03/. PP has implemented a project in Kenya which seeks to improve health and incomes throughout Kenya by reducing time and money spent acquiring fuel for household and institutional cooking. The Jikokoa stove /05/ is a charcoal stove featuring a refractory metal combustion chamber backed by abrasion resistant, lightweight ceramic insulation. The verified /05/ specification of the Jikokoa stove is as below: Power Output: 1.175 kW Thermal Efficiency: 44.9% Based on review of the documents and remote interview, verification team confirms that up-to the reported monitoring period, the PP has distributed /02-b/,/11/ total 285,814 improved cookstoves. As verified during the remote interviews, the project implementation and operation, the physical features of the project stoves complies with the registered project design document /B03/. Verification team has checked the information in the monitoring report /01-b/ and compared against the registered/ PDD /B03/ and found consistent. During the remote interviews, the verification team has checked the project location, implementation, technology applied, project equipment, physical features and monitoring system against the information in the registered/ /B03/. Verification team confirms that: a) The project activity is implemented as per registered PDD/B03/. b) The actual operation of the proposed CDM project activity is in line with the registered/ PDD /,/B03/. In summary, the monitoring period is reasonable, and the operation of the project activity is in accordance with the registered PDD /B03/.

D.3. Post-registration changes

D.3.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

>> The project has received an approval from the Gold Standard to deviate from the registered monitoring plan. The approval has been granted under the COVID-19 interim measure. The approved deviations are as follows:

1. A new KT has not been carried out, instead, data from the previous KT can be applied.
2. Carrying out monitoring surveys through telephone instead of household visits
3. Increase of vintage sample size from 30 to 40 samples for telephone surveys.

Assessment of the requirements for the VVB as indicated in the approved deviation request:

S. No.	Requirements for the VVB	Justification as how it has been addressed
1.	*The VVB shall cross-verify the results by listening to the recorded conversation and/or speaking with. randomly selected end-users.*	VVB has cross-verified the results of monitoring survey by speaking with randomly selected end-users. Please refer section C.3 and C.4 of this report for details of acceptance sampling opted by the VVB.
2.	*VVB shall ensure the completeness and conservativeness of the monitored parameters at the time of verification and issuance review.*	VVB confirms the completeness and conservativeness of the monitored parameters at the time of verification and issuance review. Please refer to section "Annex 2: Assessment of data and parameters monitored" of this report for assessment of individual ex-post parameters.
3.	*VVB may use alternative means to verify project usage claims and ensure conservativeness; for example; accounting the manufacturer specifications or similar stove specifications on the durability of the stove; project maintenance records; etc.*	As confirmed by the PP, they have committed to carry out the next survey in line with usage rules whereby all surveyed households will be visited and a usage The PP has applied the maximum recommended rate of 75%, which was also applied in the last monitoring period. This is considered conservative than the survey value of 83.2%. The ER calculations have been updated to account for the same. The above provision shall ensure the emission reduction from the project would not be over-estimated and thus acceptable to the verification team.
4.	*Verifying VVB shall raise a FAR for next issuance to capture the GS requirement for this deviation listed above on retrospective adjustment of ERs if the next MP KPT reveals significantly lower fuel savings.*	FAR-01 has been raised by the VVB, as required.

D.3.2. Corrections

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Not applicable

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

>>

Not applicable

D.3.4. Inclusion of a monitoring plan

>>
Not applicable

D.3.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

>> Not applicable

D.3.6. Changes to the project design

>> Not applicable

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

>>
Not applicable

D.4. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	Document Review, Interview
Findings	CAR 05 has been raised and satisfactorily closed. Refer Appendix 4 for details.
Conclusion	The verification team has checked the actual monitoring plan against the registered monitoring plan and monitoring methodology and applicable tools. Furthermore, the verification team has checked monitoring system during the remote interviews and document review by means of comparison with the information given in the monitoring plan and monitoring methodology. The monitoring plan is completely in accordance with the approved methodology /B01/ applied by the registered PDD /B03/.

D.5. Compliance of monitoring activities with the registered monitoring plan

D.5.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	Document Review, Interview
Findings	--
Conclusion	Verification team confirms that the data and parameters fixed ex ante are in compliance with the registered/ PDD /B03/ and monitoring plan. Please refer to the Annex 1 for assessment of each parameter.

D.5.2. Data and parameters monitored

Means of verification	Document Review, Interview
Findings	CL 01, CAR 01, and FAR 01 has been raised and satisfactorily closed. Refer Appendix 4 for details.
Conclusion	The verification team confirms that the data and parameters monitored are in compliance with the registered/revised PDD /B03/ and the monitoring plan/B03/. It is confirmed that the verification team assessed the data / information flow from the point of monitoring to emission reduction calculation and found no gap in the same. Detailed assessment of each parameter has been provided in Annex 2.

D.5.3. Implementation of sampling plan

Means of verification	Not applicable
Findings	CAR-02 FAR 02, and FAR 03 has been raised and satisfactorily closed. Refer Appendix 4 for details.
Conclusion	As per the registered Monitoring plan the sampling approach is applicable for the following monitored parameter(s): **Kitchen Test**

The data applied for the Kitchen Test during this monitoring period was the data carried out during the last monitoring period. This is as per the approved deviation /18/ by the GS for the project.

The fuel measurement was carried out in the previous monitoring period and during this period, no new KT was carried out. The results of previous KT /13/ was verified by the VVB /B03/ and approved by the GS. VVB has noted that the analysis established during the previous verification /13/ reveals that the precision level of 90/10 was achieved.

Usage Surveys (US)

As per the methodology usage survey to be carried out via household visits, however, individual household visits were not physically visited due to COVID-19 pandemic. This is as per the approved deviation /18/ by the GS for the project.

Target Population

The target population for the application of the monitoring procedure was the users of the Burn JikoKoa Stoves distributed and recorded under the project in the *Sales Database* maintained by Burn.

Sampling Method

Stratified random sampling was applied since there are three different ages. The total population of JikoKoa stoves was stratified by age. The stratifications are as shown in the tables below.

Total Stove Sale by Age

Age of Stove	Numbers of Stoves	%
Year 1	74,735	26.15%
Year 2	85,904	30.06%
Year 3	125,175	43.80%
Total	**285,814**	**100%**

On each of the strata, all stoves with end user details were given a number. Using online random number generator software https://stattrek.com/statistics/random-number-generator.aspx, 45 random numbers were generator from each age group/stratum. With random numbers generated, the matching stoves were then selected from the database and their details were identified and contacted via telephone and a questionnaire was administered.

Sample Size

VVB based on review of deviation request, confirms that the sample size recommended by GS as part of the deviation approval conditions recommends a minimum sample size of 40. PP has conducted 45 samples from each age cluster totalling 135 stoves. The PP sampled more stoves in order to cater for any non-responses. The results were analyzed and a precision level of 4.7% achieved which is within the 10 % limits of 90/10.

Telephone Survey

The survey was conducted by Burn staff and a questionnaire was administered by telephone.

The summary of number of surveys in two rounds are as below:

First and Second Round Sampling			
Age	**Sample Size**	**Successful survey**	**Unreachable/ Uncooperative**
Age 1	45	43	2
Age 2	45	38	7
Age 3	45	40	5
Total	135	121	14

	<table><tr><th colspan="4">Second Round Sampling</th></tr><tr><th>Age</th><th>Sample Size</th><th>Successful survey</th><th>Unreachable/ Uncooperative</th></tr><tr><td>Age 1</td><td>2</td><td>1</td><td>1</td></tr><tr><td>Age 2</td><td>7</td><td>6</td><td>1</td></tr><tr><td>Age 3</td><td>9</td><td>5</td><td>4</td></tr><tr><td>Total</td><td>18</td><td>12</td><td>6</td></tr></table>Please also refer section C.4 for the acceptance sampling assessment. **Leakage Assessment** The leakage was determined in the last KT. This is as per the approved deviation /18/ by the GS for the project. Therefore, during this period, the leakage was not assessed.

D.6. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document Review, Interview
Findings	-
Conclusion	N/A, since there is no monitoring equipment which require calibration.

D.7. Assessment of data and calculation of emission reductions or net removals

Means of verification	Document Review, Interview
Findings	CAR 03, CAR 04 has been raised and satisfactorily closed. Refer Appendix 4 for details.
Conclusion	The equations for baseline emissions, as provided in the monitoring report /01-b/ and confirmed with the registered PDD /B03/, the methodology Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1 /B01/ and supporting tools are: Emission reductions are calculated per stove and is based on the number of days the stove is in use during the monitoring period. Verification team based on review of the sales database and ER sheet confirms that the project technology days and emission reductions claimed for this monitoring period were calculated in a transparent and traceable manner considering the following points: 1. Operational days for both non-warranty and warranty stoves can accurately be calculated or estimated. 2. The lag time for the registered stove is 1 day while for those not activated, it is 45 days. Based on review of ER sheet, tab "Burn GS Database", Column I, it is confirmed that the formula determines if the stove is activated or not, if activated, it takes the start date as the date of activated and for non-activated stove, the formula adds 45 days from the date of purchase in order to determine the start date of that particular stove. Therefore, the ER sheets has accounted for non-activated stoves stove by adding 45 days from the date of their dispatch before they can start claiming ERs. 3. Stoves which have reached 3 years of age are automatically discontinued from claiming credits in the project 4. The parameter $N_{p,y}$ counted all stoves devices that were active and claimed carbon during the period under monitoring and adjusted with the usage rate to arrive at total devices that claimed carbon credit. 5. The ex-post calculations of emission reductions are calculated based on the fuel saving by the project stoves (Pp,y) compared with the baseline stove (Pb,y). **Calculation of baseline value or estimation of baseline situation of each SDG outcome** SDG 13: the PP has chosen to use a biomass conversion factor. The baseline fuel and the project fuel are the same and the baseline emission factor and project emission are considered the same. The overall GHG reductions achieved by the project activity in year y are calculated as follows:

	$ERy = \sum b,p\ (Np,y * Up,y * Pp,b,y * NCVb,fuel * (fNRB,b,y * EFb,fuel,CO2 + EFb,fuel,nonCO2) - \sum LEp,y$ (1) Where: $\sum_{b,p}$ Sum over all relevant (baseline b/project p) couples $N_{p,y}$ Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y $U_{p,y}$ Cumulative usage rate for technologies in project scenario p, in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction) $P_{p,b,y}$ Specific wood fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tonnes/day, as derived from the statistical analysis of the data collected from the field tests $f_{NRB,b,y}$ Fraction of biomass used in year y for baseline scenario b that can be established as non-¬-renewable biomass $NCVb,_{fuel}$ Net calorific value of the wood fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/tonne) $EF_{b,fuel,CO2}$ CO2 emission factor of the wood fuel that is substituted or reduced. (112 tCO2/TJ for Wood/Wood Waste) $EF_{b,fuel,nonCO2Non}$ CO2 emission factor of the wood fuel that is reduced $LE_{p,y}$ Leakage for project scenario p, in year y (tCO2e/yr By substituting the above formula, the emission reduction per stove per years as follows: $ER_y = \sum b,p\ (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{b,fuel,CO2} + EF_{b,fuel,nonCO2}) - \sum LE_{p,y}$ (1) = 1.421576 tCO2e/yr and 462,795 tCO_2e emissions for all the active projects.

D.7.1. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	Document Review, Interview
Findings	--
Conclusion	SDG 13. No project emissions since the emission are calculated based on the fuel savings as shown in section E.1 above. SDG 1: End poverty in all its forms everywhere, the project stove is fuel efficient and uses less charcoal compared with the baseline stoves. From the KT results, on average, a household using JikoKoa uses about 0.576Kg of charcoal per day, which translates to about 204 KGs/year. Charcoal prices in Kenya vary from time to time and on average a kilo of charcoal sells for 110 shillings in 2020, , the project uses about 63 shillings/day on charcoal.. Please also refer to the closure of CL-01 of this report. SDG 3: For 'Users' perception on smoke reduction and particulates qualitative assessment was done through third party research and results /12/ from end users response shows that the standard of quality of life has improved since the project produces less smokes. SDG 8: 'Decent Work and Economic growth' the project has employed, 242 /14/ staff directly and 62 stove repair experts indirectly.

D.7.2. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Findings	-

Conclusion	The leakage was determined in the last KT. This is as per the approved deviation /18/ by the GS for the project. Therefore, during this period, the leakage was not assessed. From the surveys during the previous monitoring KT /13/ as verified by the VVB /B03/ and approved by GS /B03/, it was established that the leakage for this project is zero.

D.7.3. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Document Review, Interview
Findings	-
Conclusion	According to the applied methodology, the emission reductions are calculated as:

Item	Baseline estimate	Project estimate	Net benefit
SDG 1	High charcoal consumption leading to high expenses for charcoal (KSh. 110/day)	Reduced charcoal consumption leading to high expenses for charcoal (KSh. 63/day)	Fuel savings of Ksh.47/day Please also refer to the closure of CL-01 of this report.
SDG 3	Presence of high smoke and particulates	Less and minimal smoke generation and particulates. Improved standard of living.	Improved air quality leading to positive outcome of improving people's lives as verified by reviewing the provided document /12/.
SDG 8	No investment hence no jobs in baseline	Project created a business and jobs for project staff and indirect jobs to repair artisans.	Positive outcome as verified by reviewing the provided document /14/.

D.7.4. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	Document Review, Interview
Findings	-
Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the PDD /B05a/ is 1, 322,388 tCO_2e and the actual emission reductions achieved for the monitoring period is 462,795 tCO_2e. Actual emission reductions are 39% of the estimated one for the current monitoring period.

Item	**Values estimated in ex ante calculation of approved PDD**	**Actual values achieved during this monitoring period**
SDG 1: End poverty in all its forms everywhere	1.633 Kg of charcoal used per day	1.068 Kg of charcoal used per day. Please also refer to the closure of CL-01 of this report.
SDG 3: Ensure healthy lives and promote well-being for all at all ages	N/A	The stove has high efficiency and consumes less fuel and produces less smoke. Kitchens have been improved and less particulates are

				produced using the stoves as verified by reviewing the provided document /12/.
		SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	N/A	242 people employed and several trainings done as verified by reviewing the provided document /14/.
		SDG 13: Climate actions	715,060 units active 2.10 ER/stove/year	293,616 units active 1.421 ER/stove/year as verified by reviewing the MR and ER sheet /01-b/, /02-b/.
		Total benefits	**1,322,388 tCO_2e**	**462,795 tCO_2e emissions**

D.7.5. Remarks on difference from estimated value in registered PDD

Means of verification	Document Review, Interview
Findings	--
Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the registered/revised PDD /B03/.is 1,322,388 tCO_2e and the actual emission reductions achieved for the monitoring period /01-b/,/02-b/ is 462,795 tCO2e Actual emission reductions are less than the estimated ones and thus justification for reduction is not required to be assessed. The verification team took cognizance of §372 of CDM VVS for project activities, version 02 /B04/.

SECTION E. Internal quality control

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The final verification report passed a technical review before being submitted to the Gold Standard. The technical review is performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification.

SECTION F. Verification/Certification opinion

>>

Carbon Check (India) Private Ltd. (CCIPL) has performed the second (2^{nd}) periodic verification (of the 2^{nd} crediting period) of the registered GS Project Activity "Burn Stoves Project in Kenya" GS 5642.

The verification team assigned by the VVB concludes that the project activity as described in the PDD (Version 4, date 22/03/2018) /B03/ and the Monitoring report (version 04, dated 01/03/2021) /01-b/, meets all relevant requirements of the Gold Standard. The verification has been conducted in-line with the GS4GG requirements project activities.

Verification methodology and process

The Verification team confirms the contractual relationship signed on 24/09/2020 between the VVB, Carbon Check (India) Private Ltd. and the Project Participant, Burn Manufacturing. The team assigned to the verification meets the CCIPL's internal procedures including the UNFCCC/GS requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

The verification has been performed as per the requirements described in the GS4GG and constitutes the review and completion of the following steps:

- Reviewing the registered PDD (Version 4, date 22/03/2018) /B03/, including the monitoring plan and the corresponding validation report;
- Desk review of the validation report MR /1/ and other relevant documents including documents related to the project activities in emission reductions;

- Review of the applied monitoring methodology (Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1 /B01/;
- Remote interview (23/10/2020)
- Resolution of CARs and CLs raised during verification
- Issuance of Verification Report

The project activity was correctly implemented according to selected monitoring methodology, monitoring plan and the registered PDD. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the document review and remote interview, the verification team confirms that the project activity has resulted in the 462,795 tCO_2e emission reductions during the 2nd monitoring period of (2nd crediting period).

This statement covers verification period from 01/10/2018 to 31/05/2020 (including both the dates).

The VVB has raised 01 clarifications and 05 corrective action requests, all of which are closed. Furthermore, VVB has also raised 03 Forward action request during this verification, which is to be addressed in next periodic verification.

The VVB considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the registered PDD are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 462,795 tCO2e equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Vintage-wise break-up of project emission reductions for the period:

Period	**Emission reductions per vintage (tCO_2e)**
01/10/2018 to 31/12/2018	69,913 tCO_2e
01/01/2018 to 31/12/2019	277,373 tCO_2e
01/01/2020 to 31/05/2020	115,509 tCO_2e
Total	**462,795 tCO_2e**

1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CA	Corrective Action/ Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final Validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emissions
MP	Monitoring Period
MR	Monitoring Report
MWh	Mega Watt Hour
OSV	On Site Visit
PE	Project Emissions
PP(s)	Project Participant(s)
PRC	Post registration change
QC/QA	Quality Control/ Quality Assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
VVB	Validation & verification body

2. Competence of team members and technical reviewers

Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	**Team Leader**	☒	**Technical reviewer**	☒
Verifier	☒	**Technical Expert**	☒	**Local Expert[1]**	☒

In the following Technical Areas:

TA 1.1	☒	**TA 3.1**	☒	**TA 5.2**	☐	**TA 9.2**	☐	**TA 13.2**	☒
TA 1.2	☒	**TA 4.1**	☒	**TA 8.1**	☐	**TA 10.1**	☐	**TA 14.1**	☐
TA 2.1	☐	**TA 5.1**	☐	**TA 9.1**	☐	**TA 13.1**	☒		

Mr. Amit Anand
CEO

Date of Approval	**Valid Till**
24/12/2019	23/12/2020

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision

[1] India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector – 3, NOIDA (Uttar Pradesh) – 201301
Tel: +91 120 4373114| URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in

Carbon Check (India) Private Ltd.

Amit Anand

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	**Team Leader**	☒	**Technical reviewer**	☒
Verifier	☒	**Technical Expert**	☒	**Local Expert**[1]	☒

In the following Technical Areas:

TA 1.1	☒	**TA 3.1**	☒	**TA 5.2**	☐	**TA 9.2**	☐	**TA 13.2**	☐
TA 1.2	☒	**TA 4.1**	☐	**TA 8.1**	☒	**TA 10.1**	☐	**TA 14.1**	☒
TA 2.1	☐	**TA 5.1**	☐	**TA 9.1**	☐	**TA 13.1**	☒		

Vikash K. Singh

Mr. Vikash Kumar Singh
Compliance Officer

Date of Approval	**Valid Till**
24/12/2019	23/12/2020

Revision History of the Document

26/12/2014	Initial Adoption
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23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision

[1] India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector – 3, NOIDA (Uttar Pradesh) – 201301
Tel: +91 120 4373114| URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in

3. Documents reviewed or referenced

Ref no.	Reference Document
/01/	a) Initial Monitoring Report, version 01, dated 07/10/2020 b) Final Monitoring Report, version 04, dated 01/03/2021
/02/	a) Emission reduction spread sheet corresponding to /01-a/ b) Emission reduction spread sheet corresponding to /01-b/
/03/	Gold Standard review comments including FAR raised during the last periodic verification. "*GS5642_Performance Review_CPI_MP6_Final Round_27092019* *GS5642_Performance Review_CPII_MP1_FINAL Round _27092019*"
/04/	GS4GG transition review comments/any FAR during the transition. "*GS5642_GS4GG_Transition_Review_Final_Round*"
/05/	Technical specification (including lifetime) of stove implemented under project along with user manual and warranty card. "*Technical Spec User Manual & Warranty Card GS 5642*"
/06/	Snap shot of data registration process in echo mobile system application "*Data Registration Process in Echo Mobile GS 5642*"
/07/	Analysis or evidence for lag time for stoves under the project activity "*Lag time of 1 day as shown in ER calculation, whereby 1 day is not counted by excel formula*."
/08/	Evidence of carbon waiver rights "*Technical Spec User Manual & Warranty Card GS 5642 Carbon Rights Waiver Box Strap*"
/09/	Evidence for the calculation of fNRB,i,y "*Determination of NRB*"
/10/	a) Initial Sample size calculation sheet for the Survey b) Evidence of the Random Sample Generated for the Survey c) Records of Annual Usage Survey for the parameter Up,y "*Survey result. The sample size was fixed at 40 based on GS COVID-19 approval requirements. - GS 5642-Deviation Request-COVID19*"
/11/	Project database records for the parameter Np,y (with a screen shot of database from echo mobile system) "*Screenshot of product DB from Echo Mobile-GS 5642*"
/12/	Records of the impact parameters (such as Perceived Air quality, Equivalent monetary savings) "*Lean Data impact results - SDG Impacts_BURN*"
/13/	Kitchen Performance Test (KPT) Results **"***KIA_KPT_Data Matrix_2018 v10-Raw Data_180927-v2***"**

/14/	a) Evidence to support Number of people directly employed by the project including records for both men and women and evidence to ensure equal pay for equivalent skills sets and job levels b) Evidence for the minimum wage requirement in Kenya "*Burn Employment Numbers 19-10-2020*"
/15/	Records of training: 1. Basic first aid training 2. Fire safety training 3. Health and safety training 4. HR trainings "*Sample Records of BURN Training 19-10-2020- training done for Burn employees who manage their carbon project.*"
/16/	Records of grievance during the reported monitoring period including the mechanism of grievance receipt and addressal. "*Sample Grievance Resolution - Warranty Claim 19-10-2020- almost all grievances raised fall under stove repairs and are done through the Echomobile platform*"
/17/	Leakage Assessment "*Assessed during KT exercise*"
/18/	*GS 5642-approved Deviation Request-COVID19 interim measure*

Background Documents

Ref no.	Reference Document
/B01/	Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1
/B02/	Community Services Activity Requirements (version 1.1) under GS4GG https://globalgoals.goldstandard.org/200-gs4gg-community-services-activity-requirements/
/B03/	a) Registered PDD and Validation Report b) Monitoring report and Verification Report of previous verification c) GS4GG Transition Annex d) GS performance review during the transition and previous MP.

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

Table 1. Remaining FAR from validation and/or previous verifications

FAR ID	01	**Section no.**	--	**Date:** 28/10/2020
Description of CAR				
As per the GS performance review of the previous monitoring period, there was a FAR; Forward Action Request # 1: PP is requested to follow the updated requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices for the subsequent MP.				
CMEresponse				**Date:** 29/10/2020
The FAR was raised in relation to previous KT whereby not all the survey samples were interviewed physically, instead the project had sampled households, interviewed all of them by phone and made home visits to half of them to confirm the answers they provided if correct. The FAR required the project to make 100% household visits during the surveys to interview households. However, this was not possible due to COVID-19 pandemic and to address this FAR, the project sought a temporary deviation approval of GS to allow the project to carry out telephone surveys instead of home visits. The temporary deviation was approved and this FAR will therefore be addressed in the next MP. The telephone surveys has now been carried out in conformity with the rules and all vintages have a minimum sample of 40 contacted.				
Documentation provided by CME				
--				
DOE assessment				**Date:** 03/11/2020
As explained in the PP's response, the issue can not be dealt during this monitoring and thus it has been forwarded to next monitoring period. FAR-03 has been raised, which is to be addressed during next monitoring period.				

FAR ID	02	**Section no.**	--	**Date:**28/10/2020
Description of FAR				
FAR from previous verification report: Per Annex 4 §1, consider next time to give subjects enough time to be acquainted with the project stove especially for the non-users KCJ ones only before launching the PFT. The subjects did not mention this.				
Project participant response				**Date:** 29/10/2020
The FAR was to be addressed in the next KT when a new KT was to be carried out. However, during this monitoring period, the project did not carry out a new KT, instead, the project sought and received approval from the GS under COVID-19 interim measures to apply the results of the last KT in this current monitoring period. Therefore, this FAR will be addressed when the project undertakes a new KT in the next monitoring period. The MR has been updated and an explanation provided.				
Documentation provided by project participant				
-				
DOE assessment				**Date:** 03/11/2020
As explained in the PP's response, the issue can-not be dealt during this monitoring and thus it has been forwarded to next monitoring period. FAR-02 has been raised, which is to be addressed during next monitoring period.				

FAR ID	03	**Section no.**	--	**Date:**28/10/2020
Description of FAR				

FAR from previous verification report: The PP shall include the relevant questions during surveys for all SD indicators and SDGs including the Perception of Air Quality. In the registered monitoring plan, the PP intends to conduct "Baseline Surveys" while in the latest PDD it will be through "Survey" for this and most other SDGs. The Baseline Surveys are defined separately from the BFT in the applied methodology. Not clear whether these "Surveys" are part of the KPT Studies or standalone Surveys. Two of the SD indicators in the registered passport explicitly mention KPT studies as the way of monitoring while the SD10 is through project training records. A clear MP for SDI/SDGs shall be followed
Project participant response **Date:** 29/10/2020
Although the project passport states that surveys were to be carried out during KT surveys. However, the project do carry different surveys on project impacts and as such, the SDG determination is carried together with these surveys. Instead, the project carries out project impact measurement through surveys using third parties and it is through these studies that the project identifies the project impacts on the applicable SDGs. The above surveys which were carried during this monitoring period were stand-alone surveys and not KPT surveys. The survey questions were modified to collect the relevant information required and these surveys capture more data and not only SDG data as per the passport.
Documentation provided by project participant
--
DOE assessment **Date:** 03/11/2020
Based on the explanation above and review of records pertaining to surveys of Usage and SDGs, the FAR has been closed.

Table 2. CL from this verification

CL ID	01	**Section no.**	D.5.2	**Date:** 22/10/2020
Description of CL				
PP is requested to provide analysis of SDG parameters as reported in section D.2 of the monitoring report based on the survey conducted. For e.g. the parameter value for "Equivalent monetary savings" could not be verified by reviewing the evidence "*Lean Data impact results - SDG Impacts_BURN*"				
CMEresponse				**Date:** 29/10/2020
The equivalent monetary saving is determined based on the amount of fuel saved and the prevailing charcoal prices. The fuel saved for this monitoring period applied was the previous KT data. The project applied the previous KT data after getting approval from the GS under COVID-19 interim measures. In order to determine the monetary gain for this MP, the fuel saved as per the previous KT data was applied and the prevailing charcoal prices were determined. By multiplying the fuel saved with the current prices of charcoal, an equivalent monetary saving is determined. The charcoal prices were determined based on the local knowledge of the prevailing prices, although the prices vary from place to place. Charcoal sales in Kenya is done by volume and not by mass and a bag of charcoal with an average weight of about 35kg- 40kg sales for about 3500-4500 shillings depending on time and place. Using the above weight and prices, the minimum price is 87 shillings per kilo and the maximum price is 128shillings per kilo. The project has applied an average price of 110 shillings per kilo to determine the monetary fuel saving.				
Documentation provided by CME				
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DOE assessment				**Date:** 03/11/2020
As clarified in the response above, in order to determine the monetary gain for this MP, the fuel saved as per the previous KT data was applied. By multiplying the fuel saved with the current prices of charcoal, an equivalent monetary saving is determined. Accordingly, the PP has calculated an average price of 110 shillings per kilo of charcoal to determine the monetary fuel saving. Verification team based on its local expertise and the fact that the deviation (from GS which allowed PP to use previous monitoring KT data), accepted the approach opted by the PP for the parameter value for "Equivalent monetary savings. CL is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	D.5.2	Date: 28/10/2020
Description of CAR				
As per deviation request accepted by the GS, for KPT, the results of the previous monitoring period are allowed to be applied, however, PD shall ensure that the fuel savings value applied is in conservative manner and accounts for degradation in project stoves performance. The PD may take into account the past performance results of stoves to establish a conservative value for fuel savings for this MP. The compliance of underlined text is to be demonstrated and followed.				
CMEresponse				**Date:** 29/10/2020
The current monitoring period is the second monitoring being undertaken by the project. The project carried out a successful verification for the period 01/05/2016 to 25/04/2017 and 26/04/2017 to 30/09/2018. The two periods combined into one single verification and the KT data applied were the same. The MRs for the two periods were separated because the first MR was for the old CP while the other was for the renewed CP. The project is registered with an evolving baseline which should be determined regularly every two years and the determination is done through carrying out a KPT. Since the baseline evolves, any degradation in stove performance will be captured during the KT. However, it is not possible to establish how the degradation will occur without the KPT since we cannot apply linear degradation as is the case with lab stove efficiency determination. However, degradation can only be projected based on the trend of previous KT data and this is possible if there are more than one KT data set. For the project, there is no trend since the data being applied is the only data available. Instead, the data applied will be compared with the data in the next MP and should it be determined that the current values are not conservative, then there would be correction through deductions as per the deviation request accepted by the GS.				
Documentation provided by CME				
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DOE assessment				**Date:** 03/11/2020
As explained in the PP's response, they do not have any trend to apply the adjustment in the value for fuel savings. In the opinion of verification team, it is deemed to be a valid justification (of not having a trend) particularly based on the fact that the project carried out a combined KPT for the two monitoring periods i.e. 01/05/2016 -25/04/2017 and 26/04/2017 -30/09/2018 before this monitoring . CAR is closed.				

CAR ID	02	Section no.	D.5.3	Date: 22/10/2020
Description of CAR				
As per the deviation request accepted by the GS, the sample size for carrying out usage surveys shall be increased from a minimum of 30 per vintage to a minimum of 40 per vintage. Verification team based on the review of the spreadsheet "GS 5642 Usage Monitoring_201009.xlsx" has noted that for age 2, only 38 samples were carried out by PP.				
CMEresponse				**Date:** 29/10/2020
There are 38 households of age 3 stoves who said they were using the stove. However, in column O, there were 4 households who were sampled, contacted and interviewed and it was established that they no longer use their stoves because the stoves had broken down or stolen etc. These 4 households, therefore, were successfully interviewed and counted as drop off (see cell O64). The total successfully interviewed for age 3 was 38 active users + 4 drop-offs. This brings the total to 42 which is above the minimum 40 required as per the deviation request accepted by the GS.				
Documentation provided by CME				
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DOE assessment				**Date:** 03/11/2020
Based on the clarification above, the CL is closed.				

CAR ID	03	Section no.	D.7.1	Date: 28/10/2020
Description of CAR				
As per § 372 of VVS for project activities, version 02.0, "The DOE shall assess the data and calculations of GHG emission reductions or net anthropogenic GHG removals achieved by from the registered CDM project activity. " In context of the requirement above, the calculation of Baseline emission as well as different parameters, as provided in spread sheet "GS5642-Burn Database-ERs heet_201006" has following comments: 1. The hardcoded values in the work sheet "Vintages" leads to a non-reproduceable calculation from the project for e.g. cell E 21 and K 21, the source of 75 % is not traceable. Due to this the value for the parameter "Np,y" as reported in the MR could not be verified by the verification team. 2. In the same work sheet, the estimated BE (refer C 26 to 28) is also hardcoded. The values of final ER is also				

inconsistent between this work sheet and section E.4 of the MR. As per table of section E.4, the value of BE and ER is different, which is misleading.

3. Similarly in work sheet "Usage" there are hardcoded values for the stove age.

PP is requested to provide a reproduceable ER spread sheet while doing so please address the comments above in all work sheets. Please also address the comments in the revised MR.

CMEresponse	**Date:** 29/10/2020

1. The formula and links to cell E 21 and K 21 have been updated and correct reference inputted. The MR has been updated based on the changes made.

2. The estimated BE (refer C 26 to 28) are values estimated in the PDD for the year 2018 and 2020. These values have been prorated to be equal to the number of days in the MP for the two years by dividing the yearly ERs by 365 to get daily ER for the project and multiplying with the number of days in the MP for that particular year. The MR has been updated and corrections are done in section E.4.

3. The Usage rates are calculated in different sheets and exported to the ER sheet. This was done to ensure the excel file size is small and since the usage calculation has a lot of links and logical formulas, linking the two will make the file big and nonresponsive when executing the commands and this will make the file non-responsive. The usage rates values has now been linked to the in the usage tab.

Documentation provided by CME
Revised MR & ER spread sheet

DOE assessment	**Date:** 03/11/2020
Based on the response above and review of Revised MR & ER spread sheet, the CAR -03 is closed.	

CAR ID	04	**Section no.**	D.7.1	**Date:** 28/10/2020

Description of CAR

PD during the document submission, it has been confirmed by the PP that the Lag time is of 1 day. However, verification team has noted that the verification report (page 11 of 39 of TUV Nord report) of previous MP reveals the following text on the lag time:

"*For the users who proceed to use the stove without registering/activating the warranty, the Burn plant has established from analyzing their system that the first stove is typically sold after 15 days on average, and the last stove on average 45 days later. This is based on when the same retailer makes new orders. Therefore, the median lag time for an unregistered stove is considered conservatively as 45 days from the date of dispatch from the factory."*

Please also refer to CAR-15 of verification report (of TUV Nord report) of the previous MP.

CMEresponse	**Date:** 29/10/2020

The lag time for the registered stove is 1 day while for those not activated, it is 45 days. In the ER sheet, tab "Burn GS Database", Column I, the formula determines if the stove is activated or not, if activated, it takes the start date as the date of activated and for non-activated stove, the formula adds 45 days from the date of purchase in order to determine the start date of that particular stove. Therefore, the ER sheets has accounted for non-activated stoves stove by adding 45 days from the date of their dispatch before they can start claiming ERs.

Documentation provided by CME
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DOE assessment	**Date:** 03/11/2020
Based on review of the ER spread sheet, verification team confirms that the lag time for the registered stove is 1 day while for those not activated, it is 45 days. This is deemed acceptable and consistency with approach of the previous verification results. CAR is closed.	

CAR ID	05	**Section no.**	D.4	**Date:** 28/10/2020

Description of CAR

As per the approved GS4GG transition annex, for the parameter "fNRB,i,y, the frequency of monitoring is "Fixed by baseline study for this crediting period". The value in the transition annex and previous monitoring report for the parameter was 0.8948. PP is requested to clarify the reason for the update of the parameter, while doing so its compliance with the registered monitoring plan is required to be demonstrated.

CMEresponse	**Date:** 29/10/2020
The f_{NRB} has been revised and updated. The correct value of 0.8948 is now applied.	

Documentation provided by CME
Revised MR & ER spread sheet

DOE assessment	**Date:** 03/11/2020

The Revised MR & ER spread sheet provides a value of 0.8948, which is as per the registered monitoring plan; checked and confirmed by the verification team. CAR is closed.

Table 3. FARs from this verification

FAR ID	01	**Section no.**	D.5.2	**Date:** 28/10/2020
Description of CAR				
As per the deviation request accepted by the GS, Verifying VVB shall raise a FAR for the next issuance to capture the GS requirement for this deviation listed above on retrospective adjustment of ERs if the next MP KPT reveals significantly lower fuel savings. Furthermore, as confirmed by PP, they have committed to carry out the next survey in line with usage rules, whereby all surveyed households will be visited and a usage value be established and should that value be established to be lower than the current value of 83.20%, then a deduction will be made retroactively on the ERs.				
CMEresponse				**Date:** 29/10/2020
The project will in the next verification compared the new values from the KT and surveys and follow the GS deviation requirements of retrospective adjustment of ERs if the next MP KPT reveals significantly lower fuel savings.				
Documentation provided by CME				
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DOE assessment				**Date:**

FAR ID	02	**Section no.**	D.5.3	**Date:** 03/11/2020
Description of FAR				
Per Annex 4 §1, consider next time to give subjects enough time to be acquainted with the project stove especially for the non-users KCJ ones only before launching the PFT. The subjects did not mention this.				
Project participant response				**Date:**
Documentation provided by project participant				
-				
DOE assessment				**Date:**

FAR ID	03	**Section no.**	D.5.3	**Date:** 03/11/2020
Description of CAR				
PP is requested to follow the updated requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices for the subsequent MP.				
CMEresponse				**Date:**
Documentation provided by CME				
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DOE assessment				**Date:**

Annex 1: Assessment of data and parameters fixed ex-ante at the time of validation

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter	EFb,CO2
Data unit	tCO2/TJ
Default values used	112
Purpose of data	To determine the CO2 emission factor of the wood fuel
Source of verification of the source	IPCC Default emission factor

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter	EFb,nonCO2
Data unit	tCO2/TJ
Default values used	0.00
Purpose of data	To determine the Non-CO2 emission factor arising from use of fuels in baseline scenario
Source of verification of the source	IPCC default values provide an accurate and conservative estimate of emissions reduction from various fuel sources.

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter	EFp,CO2
Data unit	tCO2/TJ
Default values used	112
Purpose of data	To determine the CO2 emission factor of the wood fuel
Source of verification of the source	IPCC defaults are applied in conjunction with credible published literature

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter	EFp, nonCO2
Data unit	tCO2/TJ
Default values used	0.00
Purpose of data	To determine the CH4 emission factor of the wood fuel
Source of verification of the source	IPCC defaults are applied in conjunction with credible published literature

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter	NCVb
Data unit	TJ/tonne
Default values used	0.015
Purpose of data	To determine the calorific value of wood fuel used in the baseline
Source of verification of the source	IPCC 2006 defaults values

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Data/parameter	NCVp
Data unit	TJ/ton
Default values used	0.015
Purpose of data	To determine the net calorific factor of the wood fuel
Source of verification of the source	IPCC 2006 defaults values

Annex 2: Assessment of data and parameters monitored

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13: Climate Action Target: 13.1 Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
Data / Parameter: (as in monitoring plan of PDD):	fNRB,i,y Non-renewability status of woody biomass fuel in scenario i during year y
Measuring frequency/Time Interval:	Fixed by baseline study for this crediting period
Reported value & Unit:	0.8948
Verified Source of Data	The value of this parameter was fixed during the 1st periodic verification (of the 2nd crediting period). The same was verified by the VVB /B03/ and approved by the GS /B03/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Please refer to the closure of CAR-05 of this report.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13: Climate Action Target : 13.1 Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
Data / Parameter: (as in monitoring plan of PDD):	Pb,y Kg/household-day Quantity of fuel that is consumed in baseline scenario b during year y
Measuring frequency/Time Interval:	Updated every two years
Reported value & Unit:	1.6335 (GS 5642 - Burn Database_ER_Sheet_201006, ER per Stove Tab, C7)
Verified Source of Data	Baseline FT or default baseline fuelwood consumption, baseline FT updates, and any applicable adjustment factors
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The data applied for the Kitchen Test during this monitoring period was the data carried out during the last monitoring period. This is as per the approved deviation /18/ by the GS for the project. The fuel measurement was carried out in the previous monitoring period and during this period, no new KT was carried out. The results of previous KT /13/ was verified by the VVB /B03/ and

	approved by the GS. Please refer to the closure of CAR-01 of this report.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	Yes, refer assessment above.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13: Climate Action Target : 13.1 Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
Data / Parameter: (as in monitoring plan of PDD):	Pp,y kg/household-day Quantity of fuel that is consumed in project scenario p during year y
Measuring frequency/Time Interval:	Updated every two years
Reported value & Unit:	1.0679 (GS 5642 - Burn Database_ER_Sheet_201006, ER per Stove Tab, C12) /02/
Verified Source of Data	The data applied for the Kitchen Test during this monitoring period was the data carried out during the last monitoring period. This is as per the approved deviation /18/ by the GS for the project. The fuel measurement was carried out in the previous monitoring period and during this period, no new KT was carried out. The results of previous KT /13/ was verified by the VVB /B03/ and approved by the GS. Please refer to the closure of CAR-01 of this report.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13. Climate Action Target: 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Data / Parameter: (as in monitoring plan of PDD):	Up,y Usage rate in project scenario p during year y
Measuring frequency/Time Interval:	Annual or more frequently, in all cases on time for any request for issuance
Reported value & Unit:	83.20% (as per the survey, however PP has applied a value of 75% for ER calculation)
Verified Source of Data	Yes, the parameter was cross- checked by the verification team as per the worksheet usage of GS 5642 - Burn Database_ER_Sheet_201006"/02/ and survey records /10/. Please also refer section C.4 for the acceptance sampling assessment. As per the deviation request, the resultant value should be compared with previous values and if higher, the more conservative value be applied. The PP has applied the maximum recommended rate of 75% which was also applied in the last monitoring period. This is considered more conservative than the survey value of 83.2% and thus acceptable to the verification team. Please refer to the closure of CAR-02 of this report.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13. Climate Action Target: 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Data / Parameter: (as in monitoring plan of PDD):	$N_{p,y}$ Project technologies credited (units)
Measuring frequency/Time Interval:	Continuous
Reported value & Unit:	285,814
Verified Source of Data	The parameter $N_{p,y}$ counted stoves devices that were active and claimed carbon during the period under monitoring. Verification team based on review of worksheet Vintages Tab, H21 of GS

	5642 – Burn Database_ER_Sheet_201006" /02/ and by reviewing the Burn's database /11/ confirms that the project database is clustered by age and during the monitoring period a total active stove count is 285,814; checked and confirmed by the verification team. In the opinion of verification team the approach used for the calculation of the parameter is appropriate as well conservative.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13: Climate Action Target: 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Data / Parameter: (as in monitoring plan of PDD):	$LE_{p,y}$ Leakage in project scenario p during year y
Measuring frequency/Time Interval:	Every two years
Reported value & Unit:	0, tCO2e /year
Verified Source of Data	The leakage was determined in the last KT. This is as per the approved deviation /18/ by the GS for the project. Therefore, during this period, the leakage was not assessed. From the surveys during the previous monitoring KT /13/ as verified by the VVB /B03/ and approved by GS /B03/, it was established that the leakage for this project is zero.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 3: Ensure healthy lives and promote well-being for all at all ages Target: 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
Data / Parameter: (as in monitoring plan of PDD):	Perceived Air quality
Measuring frequency/Time Interval:	Biennial
Reported value & Unit:	-Majority of those surveyed were of the opinion that the air quality in their kitchens has improved due to use of JikoKoa. this is more so because the JikoKoa does not produce smoke compared with baseline charcoal stoves. On the thirds party survey carried out, 51% of customers said that they have experienced a change in health as a result of using the BURN cookstove. The most common benefits were no smoke or headaches when cooking with the stove
Verified Source of Data	Based on review of the provided documents /12/ (and acceptance sampling as detailed in section C.4 of this report), verification team confirms the value/result of this parameter as correct and appropriate. The frequency as well as target value of the parameter is deemed appropriate. /15/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 1: End poverty in all its forms everywhere Target1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
Data / Parameter: (as in monitoring plan of PDD):	Equivalent monetary savings
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	0.57 kg/day of charcoal translating to 63 shillings per day savings
Verified Source of Data	Please refer the closure of CL-01 for the assessment if correctness and appropriateness of the value applied.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment,	NA

its specification and calibration as per the requirements of registered PDD:	
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 8: Decent Work and Economic growth Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value for both men and women.
Data / Parameter: (as in monitoring plan of PDD):	Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	242
Verified Source of Data	Yes, the verification team has cross checked the Project records /14-a/ to confirm the average salary as well the numbers. The average salary is confirmed to be above the minimum wage requirements /14-b/ of Kenya and thus acceptable to the verification team.

DEPARTMENTS	Numbers	Gender		Average salary scale (Ksh)
		M	F	
After Sales	15	3	12	47,333
Finance	11	3	8	129,545
HR & Admin	16	3	13	82,346
Inventory	13	12	1	85
IT	2	2	0	117,000
Market Research	13	8	5	77,058
Marketing	4	1	3	116,284
Production line	64	29	35	88
Production management	10	7	3	134,233
Quality Assurance	15	7	8	120
Research and Development	29	27	2	98,159
Sales	39	10	29	34,559
Supply chain	11	10	1	106,163
Total number of employees	242	122	120	

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.

place?	
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	Goal 13. Take urgent action to combat climate change and its impacts Target 13.1 Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
Data / Parameter: (as in monitoring plan of PDD):	Number of people/households with access to the energy efficient cook stoves and the usage rates of efficient cook stoves.
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	The project has been selling stoves in Kenya since inception and currently there are 351,814 active households who have access to the stove within the period of monitoring. However, by adjusting with usage rate, the number of stoves reduces to 237,809 and this is the number which claims emission reductions. These are the households whose stove is within the 3-year life span. The weighted average usage rate /10/ for the project is 83.20% as per the survey results /10/, although for ER calculation, a value of 75% has been applied in compliance with deviation request approval.
Verified Source of Data	Verification team cross checked Stove database records and surveys and confirms that a total 237,809 (after adjustment of the usage rate) active/operating improved cookstoves for the current monitoring period. /02/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA