



## **Sustainability Verification Report**

**For**

## **Gold Standard Verification of PoA**

**“The Breathing Space Improved Cooking Stoves Programme, India” GS ID 916**

**by**

**Envirofit International Limited**

The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 06 Envirofit  
The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 07 Envirofit  
The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 08 Envirofit  
The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 09 Envirofit  
The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 10 Envirofit  
The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 11 Envirofit

**Gold Standard Ref No:**

GS 916 (PoA),

GS 3364 (VPA 06), GS 3365 (VPA 07), GS 3366 (VPA 08) and 3367 (VPA 09) GS  
4291 (VPA 10), GS 5046 (VPA 11)

**Monitoring Period:**

01/08/2017 to 31/07/2020

Report No: CCIPL879/GS/VER/TBSI/20201117

*Revision number: 03*

***Report Date 15/04/2021***

**Carbon Check (India) Private Ltd.**

Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh

## I. PROJECT DATA

<b>Project title:</b>	<b>PoA:</b> The Breathing Space Improved Cooking Stoves Programme, India <b>VPAs:</b> <ol style="list-style-type: none"> <li>1. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 06 Envirofit</li> <li>2. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 07 Envirofit</li> <li>3. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 08 Envirofit</li> <li>4. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 09 Envirofit</li> <li>5. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 10 Envirofit</li> <li>6. The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 11 Envirofit</li> </ol>		
<b>Registration No. / Date:</b>	GS 916 / 09-07-2012  GS 3364 (VPA06)/ 28-11-2014 GS 3365 (VPA07)/ 28-11-2014 GS 3366 (VPA08)/ 28-11-2014 GS 3367 (VPA09)/ 28-11-2014 GS 4291 (VPA10)/ 16-08-2017 GS 5046 (VPA11)/ 16-08-2017	<b>Scale:</b>	Small
<b>Monitoring period:</b>	01/08/2017 to 31/07/2020, Both days inclusive	<b>Monitoring Period Number:</b>	4
<b>Methodology:</b>	AMS-II.G. Version 03	<b>Sectoral Scope/Technical Area:</b>	03/3.1
<b>Publication of MR:</b>	N/A		
<b>Final Monitoring Report:</b>	Monitoring report (version 02, 12/03/2021).		
<b>Average emission reductions:</b>	Estimated: 388,858 tCO <sub>2</sub> e	Verified:	323,452 tCO <sub>2</sub> e/yr
<b>GHG reducing measure/technology:</b>	GHG reduction due to reduction of fuel-wood consumption (non-renewable biomass) through implementation of efficient Cookstoves.		

Party	Project participants	Party considered a project participant	Contract party
India (Host)	Envirofit International Limited (private entity)	Yes/No	<input checked="" type="checkbox"/>

## II. VERIFICATION TEAM

Verification Team			Role										
Full name	Affiliation	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting/trainee Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting/Trainee Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR	Trainee Assessor
Mr. Sanjay Kumar Agarwalla	Carbon Check	1.1, 1.2, 2.1,3.1,4.1,5.1,5.2, 9.1,9.2, 13.1	X		X		X						
Ms. Priya Suman	Carbon Check												X
Mr Vikash Kumar Singh	Carbon Check	1.1, 1.2, 3.1, 4.1, 8.1, 13.1, 13.2, 15.1								X			X


## III. VERIFICATION REPORT

### Verification Phases and Status:

Desk Review       Follow up interviews, On Site Assessment

Resolution of outstanding issues       Corrective Actions / Clarifications Requested

Full Approval and Submission for Issuance       Rejected.

Final Approval Date	Approval	Distribution
<input checked="" type="checkbox"/>	By: Amit Anand	<input type="checkbox"/> No distribution without permission from the Client or responsible organizational unit <input type="checkbox"/> Limited Distribution <input checked="" type="checkbox"/> Unrestricted distribution
Date: 2021/04/16		



## Abbreviations

<b>BAU</b>	Business As Usual
<b>CA</b>	Corrective Action / Clarification Action
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CAR</b>	Corrective Action Request
<b>CCIPL</b>	Carbon Check (India) Private Ltd.
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CL</b>	Clarification Request
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>CO<sub>2e</sub></b>	Carbon Dioxide Equivalent
<b>DOE</b>	Designated Operational Entities
<b>DVR</b>	Draft Validation Report
<b>EB</b>	CDM Executive Board
<b>ETN</b>	Electricity Transaction Note
<b>EF</b>	Emission Factor
<b>FA</b>	Final Approval
<b>FAR</b>	Forward Action Request
<b>FVR</b>	Final validation Report
<b>GS</b>	Gold Standard
<b>GHG</b>	Greenhouse gas(es)
<b>GWh</b>	Giga Watt Hour
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>MP</b>	Monitoring Plan
<b>MWh</b>	Mega Watt Hour
<b>MRR</b>	Monthly Reading Records
<b>OSV</b>	On Site Visit
<b>QC/QA</b>	Quality control/Quality assurance
<b>RMP</b>	Revised Monitoring Plan
<b>TA</b>	Technical Area
<b>TR</b>	Technical Review
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VVS</b>	Validation and Verification Standard



## Verification Opinion — summary

Carbon Check (India) Private Ltd. has performed the 4<sup>th</sup> periodic verification of the registered PoA “The Breathing Space Improved Cooking Stoves Programme, India” GS reference number GS 916, registration date 09/07/2012.

The monitoring period under assessment is from 01/08/2017 to 31/07/2020 (inclusive of both days). The verification team assigned by the DOE concludes that the GS PoA as described in the GS SSC PoA-DD (version 5.2, dated 21/11/2012) /B01/, GS SSC VPA-DDs (for each respective VPAs as cited above) /B02/, GS Passports for the PoA and respective VPAs /B11/, GS4GG Transition Annex AA /B04/ and monitoring report (version 3.0, 12/04/2021) /01/, meets all relevant requirements of the Gold Standard for Global Goals/B09/. The verification has been conducted in-line with the requirements of CDM VVS for PoAs (version 02.0) /B05/ and GS4GG principles & requirements version 1.2, GS4GG safeguarding principles & requirements version 1.2, GS4GG programme of activity requirements version 1.2, GS4GG community services activity requirements version 1.2 /B09/ and other relevant requirements as applicable.

### Verification methodology and process

The Verification team confirms the contractual relationship signed on 11/02/2021 between the DOE, Carbon Check (India) Private Ltd. and the Project Participant, Envirofit International Limited /15/. The team assigned to the verification meets the Carbon Check (India) Private Ltd. internal procedures including the UNFCCC and GS4GG requirements /B09/ for the team composition and competence. CCIPL has conducted a thorough contract review as per UNFCCC, GS4GG and Carbon Check procedures and requirements.

The verification has been performed as per the requirements described in the Gold Standard for the Global Goals Principles & Requirements (version 1.2); Community Services Activity Requirements (version 1.2); Programme of Activity Requirements (version 1.2), Safeguarding principles & requirements (version 1.2) /B09/, and CDM VVS for PoA (version 02.0) /B05/ and constitutes the review and completion of the following steps:

- Reviewing the registered PoA-DD /B01/ (version 5.2, dated 21/11/2012), including the monitoring plan and the corresponding validation report and the Gold Standard Passport/B02/, the Sustainability Matrix and monitoring data, GS4GG transition Annex AA/B04/;
- Desk review of the MR /01/, previous verification reports/B03/, deviation request/B10/ and requests for the revision of monitoring plan and other relevant documents including documents related to the project activities in emission reductions.
- Review of the applied monitoring methodology AMS-II.G. “Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass” (version 03) /B05-2/
- Review of any CMP and EB decisions, clarifications and guidance from the Gold Standard;
- Remote interview (06/03/2021-07/03/2021 and 09/03/2021)
- Issuance of Draft Verification Report (11/03/2021)
- Resolution of CARs and CLs raised during verification.
- Confirmation that any FARs raised during validation or previous verification have been addressed by the Project Participant.
- Issuance of Verification Report.

In Carbon Check’s opinion the project activity has been implemented in accordance with the monitoring methodology /B05-2/, monitoring plan /B01/ as contained in the registered PoA-DD and VPA-DDs /B01/, /B02/. Based on document review and remote interviews, the verification team confirms that the project has resulted in 323,452 tCO<sub>2</sub>e of net emission reductions during the reported monitoring period. The GHG parameters and non-GHG parameters were correctly calculated/monitored on the basis of the applied approved monitoring methodology



/B01/,/B05-2/ and as per the registered GS passport (of each VPA) /B11/.and GS4GG Transition Annex AA /B04/ respectively.

Carbon Check as the DOE is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement and certify the net emission reductions-of 323,452 tonnes of CO<sub>2</sub> equivalent from the PoA "The Breathing Space Improved Cooking Stoves Programme, India" during the above stated monitoring period.



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## 1. INTRODUCTION

Envirofit International Limited has appointed Carbon Check (India) Private Ltd. to perform an independent verification of the GS PoA “The Breathing Space Improved Cooking Stoves Programme, India” (hereafter referred to as “project activity”). This report summarises the findings of the verification of the project, performed on the basis of GS4GG principles & requirements version 1.2, GS4GG safeguarding principles & requirements version 1.2, GS4GG programme of activity requirements version 1.2, GS4GG community services activity requirements version 1.2 /B09/ and paragraph 62 of the CDM M & P, as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the CDM Executive Board and Gold Standard Secretariat. Verification is required for all registered GS PoA/VPA /B01/, /B02/ intending to confirm their achieved emission reductions and proceed with request for issuance of GS-VERs. This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions.

### Objective

Verification is the periodic independent review and *ex post* determination of both quantitative and qualitative information by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered GS PoA/VPA /B01/, /B02/ during a defined monitoring period.

Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the emission reductions as verified. Hence, this will be issued only after the successful closure of CARs and CLs.

The objective of this verification was to verify and certify emission reductions reported for the VPA 06 - VPA 11 under the GS-PoA “The Breathing Space Improved Cooking Stoves Programme, India” in country “India” for the monitoring period 01/08/2017 to 31/07/2020 (both days inclusive).

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. Other non-GHG parameters shall also be assessed as per the requirement of GS. Verification of emission reductions for Gold Standard crediting is only for eligible gases.

In particular the monitoring plan, monitoring report and the project’s compliance with relevant GS4GG/UNFCCC and host Party criteria are verified in order to confirm that the project has been implemented in accordance with the previously registered project design and conservative assumptions, as documented. And also, to confirm that monitoring plan is in compliance with the registered SSC PoA-DD/B01/ and approved monitoring methodology/B05-2/.

### Scope

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered SSC-PoA-DD and VPA-DDs/B01/, /B02/ and GS4GG transition Annex AA/B04/.



- To verify the implemented monitoring plan with the registered SSC-PoA-DD and VPA-DDs/B02/, and GS4GG transition Annex AA/B04/ and applied baseline and monitoring methodology/B05-2/.
- 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/02/ 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 and other non-GHG parameters as per the requirement of GS is sufficiently supported by evidence.

Carbon Check scope of verification as a third-party verifier is to verify project emission reductions and sustainable development impacts against the requirements set out by the Gold Standard. The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The verification comprises a review of the Monitoring report over the monitoring period (01/08/2017 to 31/07/2020) (both days inclusive) and based on the registered SSC-PoA-DD/B01/and VPA-DDs/B02/ in part of the monitoring parameters and monitoring plan, emission reduction calculation spread sheet/02/, monitoring methodology and all related evidence provided by project participant.

Remote interview and stakeholders' interviews are also performed as part of the verification process.

### Project Activity Description

Review of monitoring report /01/ reveals that the objective of the PoA is to distribute improved cookstoves (ICS) to domestic households in India. The ICS have been designed to allow more efficient heat transfer and offer complete fuel combustion which results in reduced consumption of fuel (like firewood, charcoal etc.) and improves indoor air quality due to reduced emission of smoke, PM and indoor air pollutants. The ICS are a more environment friendly, sustainable and overall healthy means of cooking for rural households.

The VPAs of the PoA involves number of stove models, however emission reduction during the reported monitoring period are being claimed on G3300 and PCS1 model of ICS/03/. A brief summary /03/ of these two stove models are provided below:

ICS Model	Type	Unit Weight (kg)	Dimensions (cm x cm x cm)	Average Thermal Efficiency (%)	Average Fuel use (g)	Average Fuel reduction (%)
G3300	Single pot stove	5.2	28.8 x 26.1 x 27.5	32.6	596.7	50.1
PCS1	Single pot (premium) stove	5.1	26 x 31 x 27	36.5	382.2	60

Envirofit is the coordinating/ managing entity (CME) for the programme. Thirteen VPAs have been included in the program /B01/ and ICSs distributed in VPA 06 to 11 are being covered under the monitoring period. A total of 212,513 ICS have been distributed in VPA 06-11 as follows:

VPA Number	Total number of units sold
GS 3364 VPA 06	21,517



GS 3365 VPA 07	33,397
GS 3366 VPA 08	34,128
GS 3367 VPA 09	36,888
GS 4291 VPA 10	43,299
GS 5046 VPA 11	43,284
<b>Grand Total</b>	<b>212,513</b>

However, due to ICS expiries, the VPA wise break-up of total number of ICS (for which credits are being claimed accounting design operational lifetime and expiries) in each monitoring session within the monitoring period are as below:

<b>For MS#1<sup>1</sup></b>			
<b>VPA number</b>	<b>G3300</b>	<b>PCS1</b>	<b>Grand Total</b>
GS 3364 VPA 06	6,697	-	6,697
GS 3365 VPA 07	33,332	-	33,332
GS 3366 VPA 08	8,180	24,003	32,183
GS 3367 VPA 09	3,214	33,666	36,880
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>51,423</b>	<b>141,127</b>	<b>192,550</b>

<b>For MS#2</b>			
<b>VPA number</b>	<b>G3300</b>	<b>PCS1</b>	<b>Grand Total</b>
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	4,827	24,003	28,830
GS 3367 VPA 09	3,214	33,666	36,880
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>8,041</b>	<b>141,127</b>	<b>149,168</b>

<b>For MS#3</b>			
<b>VPA number</b>	<b>G3300</b>	<b>PCS1</b>	<b>Grand Total</b>
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	-	-	-
GS 3367 VPA 09	2,067	1,755	3,822
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>2,067</b>	<b>85,213</b>	<b>87,280</b>

The value of  $f_{NRB}$  has been calculated using the state-wise data mentioned in the PoA-DDs and VPA-DDs /B01/, /B02/. The weighted average value of level  $f_{NRB}$  is 0.890, 0.896, 0.902 for MS1, MS2 and MS3 respectively /02/ (weighted average for the states where ICS under respective VPAs are located). Verification team confirms the NRB assessment based on the values mentioned on the PoA-DD/B01/ and VPA-DD/B02/, are correct, which have already

<sup>1</sup> Over the monitoring period, three annual monitoring events were conducted each corresponding to an annual monitoring period (i.e. First Monitoring Session (MS#1) covering 01 Aug 2017 – 31 Jul 2018, Second Monitoring Session (MS#2) covering 01 Aug 2018 – 31 Jul 2019 and Third Monitoring Session (MS#3) covering 01 Aug 2019 – 31 Jul 2020).



been validated by the validating DOE during the registration of the PoA and inclusion of the concerned VPAs.

The PoA aims to support sustainable development in the host country, India. The implementation of ICSs has improved the environment and individual household conditions wrt indoor air pollution by reduction in smoke, black soot and particulate matter emissions. These Improved biomass cook stoves are built to reduce use of wood and therefore equivalent indoor air pollutants attributed to incomplete combustion of fuel wood (CO and PM) in baseline scenario. This project reduces greenhouse gas emissions by disseminating efficient biomass cook-stoves, which are more efficient than baseline three stones and other traditional stoves as verified during onsite observation and interview with household users.

The verification team confirm that the project is in line with the plans contained in the registered GS PoA-DD and VPA-DDs/B01/, /B02/.

## **2. METHODOLOGY**

The verification consists of the following four phases:

1. Completeness check of the Emission Reductions/02/, GS4GG Monitoring report/01/ and Gold Standard Sustainability Monitoring Report, and Project Administration System;
2. Review of project documentation (monitoring plan, monitoring report, monitoring methodology, project design document, applicable tools in particular attention to the frequency of measurements, QA/QC procedures and other relevant documents and regulations);
3. Remote interview (including follow-up interviews with project stakeholders, when deemed necessary) includes the following:
  - An assessment of implementation and operation of project activity with respect to registered PoA-DD/B01/ and VPA-DDs/B02/ or approved revised PoA-DD and VPA-DDs, if any;
  - Review of information flows for generating, aggregating and reporting the monitoring parameters;
  - Interview with relevant personals to determine whether the operations and data collection procedures are implemented and in accordance with monitoring plan of the PoA-DD/B01/ and VPA-DDs/B02/;
  - Cross check of information and data provided in the monitoring report with original monitoring survey questionnaires and WBT test observation record sheets. Also, checking the consistency of the information reported as per the survey forms with actual physical conditions in sampled households;
  - Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and POA-DD/B01/;
  - Review of assumptions made in calculating the emission reductions;
  - Implementation of QA/QC procedure in-line with the PoA-DD/B01/ and methodology requirement/B05-2/.
4. Resolution of outstanding issues and the issuance of the final Verification report and Certification statement.

The following sections outline each step in more detail.

### Duration of Verification:

- Signing of Letter of Engagement: 11/02/2021
- Remote interview: 06/03/2021-08/03/2021
- Reporting/Calculations/Quality and Control checks: 18/03/2021

## Desk review

The following table outlines the documentation reviewed during the verification:

No.	Title
/01/	Monitoring Report
/02/	Emission Reduction spread-sheet
/03/	Technical specification of cookstoves G 3300 and PCS 1 Envirofit product catlog
/04/	Summary for all end users of the VPA containing details of the end user, stove model, batch number and distributor.
/05/	Sample sales records/warranty cards
/06/	WBT records (for MS#1 and MS#2) WBT protocol WBT test results (for MS#1 and MS#2)
/07/	Record of ex-post survey (for MS#1, MS#2 and MS#3) done for the monitoring of parameters:- <ul style="list-style-type: none"> <li>• Stove Operation Fraction</li> <li>• Disposal/Discontinuation of traditional cookstove</li> <li>• Access to Basic Services, Household Savings</li> <li>• Reduction in Smoke / PM emissions</li> <li>• Affordable and clean energy services</li> <li>• Quantitative employment and income generation</li> </ul>
/08/	Records of HR / Sales and marketing records for the parameter," QE IG" i.e. Quantitative employment and income generation.
/09/	Records of training Declaration from Envirofit regarding having experience in field survey monitoring (Usage Survey) and performance assessment of stoves (WBTs)
/10/	Proof of start date for all VPAs
/11/	Evidence for Substantiation of market awareness raising initiatives like demonstrations, stalls, public displays, trainings etc.
/12/	Proof that end users are aware of and give up their rights on emission reductions Warranty card template
/13/	Random number evidence for sampling using stratified random sampling approach
/14/	Monitoring equipment documents for MS#1 and MS#2 <ul style="list-style-type: none"> <li>• Invoice of digital moisture meter</li> <li>• Invoice of digital thermometer</li> <li>• Invoice of digital weighing scale</li> </ul>
/15/	Contractual relationship signed between the DOE, Carbon Check (India) Private Ltd. and the Project Participant, Envirofit International Limited- 11/02/2021

During the desk review, Carbon Check applied the standard auditing techniques to assess the quality of information provided.

## Background documents:

Ref no.	Reference Document
/B01/	Registered PoA DD and corresponding validation Report
/B02/	Registered VPA DD and corresponding validation report <ul style="list-style-type: none"> <li>• VPA 06: version 02 dated 27/10/2014</li> <li>• VPA 07: version 02 dated 27/10/2014</li> <li>• VPA 08: version 02 dated 27/10/2014</li> <li>• VPA 09: version 02 dated 27/10/2014</li> <li>• VPA 10: version 3.1 dated 21/08/2017</li> <li>• VPA 11: version 3.1 dated 21/08/2017</li> </ul>
/B03/	Documents pertaining to 3 <sup>rd</sup> Verification <ul style="list-style-type: none"> <li>• Monitoring Report</li> <li>• Verification Report</li> <li>• GS review comments</li> <li>• GS 916 MP#3 Issuance Review Final Feedback form</li> <li>• GS 916 VPA 12-13 Performance Review_Final_Feedabck form</li> </ul>
/B04/	GS 916 Transition-Annex- v 3.0 06112019 Clean GS916 & VPA 1-15 transition review_FINAL_07112019
/B05-1/	CDM VVS for PoA (version 02.0) CDM PS for PoA (version 02.0) CDM PCP for PoA (version 02.0)
/B05-2/	Applied baseline and monitoring methodology, “AMS-II.G, version 03 “Energy efficiency measures in thermal applications of non-renewable biomass”
/B06/	Instructions for filling out the Gold standard for the global goals - Monitoring report (version 1.1)
/B07/	Guidelines: Sampling and surveys for CDM project activities and programmes of activities (version 04.0)
/B08/	Standard: Standard for sampling and surveys for CDM project activities and Programme of Activities (version 08.0)
/B09/	Gold Standard for Global Goals Principles & Requirements (version 1.2) Gold Standard for Global Goals Community Services Activity Requirements (version 1.2) Gold Standard for Global Goals Programme of Activity Requirements (version 1.2) Gold Standard for Global Goals safeguarding principles & requirements (version 1.2)
/B10/	T-V4.0-Deviation-Request-Form_GS916 VPA 12 ^L0 VPA 13_Request_GSdecision
/B11/	GS Passport for VPA 06-11 VPA 06: version 02 dated 06/10/2014 VPA 07: version 02 dated 27/10/2014 VPA 08: version 02 dated 27/10/2014 VPA 09: version 02 dated 27/10/2014 VPA 10: version 3 dated 03/07/2017 VPA 11: version 3.1 dated 03/06/2017
/B12/	COVID-19 Interim Measures: <a href="https://globalgoals.goldstandard.org/ru-2020-covid-19-interim-measures-update/">https://globalgoals.goldstandard.org/ru-2020-covid-19-interim-measures-update/</a>



## Remote and follow-up interviews with project stakeholders

### A.1. On-site inspection

No on-site inspection has been conducted for the verification of the PoA.

#### Justification for not conducting on site inspection:

Carbon Check has not conducted an on-site inspection, which is in conformity with CDM Executive Board's recommendation to avoid site visit due to COVID-19 outbreak ([https://cdm.unfccc.int/newsroom/latestnews/releases/2020/01041\\_index.html](https://cdm.unfccc.int/newsroom/latestnews/releases/2020/01041_index.html)) and COVID-19 Interim Measures (<https://globalgoals.goldstandard.org/ru-2020-covid-19-interim-measures-update/>).

The on-site inspection could-not be postponed due to time-line agreed between the Project Participant and the DOE.

Regarding GS4GG requirements/B09/ 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 physical on-site inspection) for the project in accordance with the provisions of paragraph 4.1.1. (b) of Rule Update: COVID 19: Interim Measures/B12/, 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."*

Remote interview was performed by the verification team of Carbon Check from (06/03/2020-07/03/2020 and 09/03/2020) and the following activities were performed:

- i. An assessment of the implementation and operation of the registered GS PoA as per the registered SSC-PoA-DD /B01/ and the respective VPA DD /B02/;
- ii. A review of information flows for generating, aggregating and reporting the monitoring parameters;
- iii. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the SSC PoA-DD/B01/ and the VPA-DD/B02/;
- iv. A cross check between information provided in the monitoring report /01/ and data from other sources such as purchase records /05/, monitoring survey questionnaires /07/ or similar data sources;
- v. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PoA-DD /B01/ and the selected methodology /B05-2/ and corresponding tool(s), where applicable;
- vi. A review of calculations and assumptions made in determining the GHG data and emission reductions/02/
- vii. An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.  
Verification of the monitoring of sustainable development indicators

The project representatives and stakeholders were interviewed via skype video call on: 06/03/2021-07/03/2021 and 09/03/2021. The CME arranged local field staff which travelled to the household locations of the identified samples and executed the video calls from those

locations for skype interview of the sampled user by the VVB team. The link of the skype video call records has been shared in the response of GS review comments.

Sl. No.	Name	Organization	Topic	Means of Interview
1.	Mr. Rohit Lohia	Envirofit International	Project implementation, Monitoring Report, discussed contents of the MR, GHG and non-GHG parameters, topics like project implementation /operation, compliance of monitoring plan with monitoring methodology, registered PoA-DD, ER calculation etc.	Skype video call
2.	Ashutosh Tiwari	Climate secure India Private limited	Project implementation, Discussion on sales of cook stove, QA/QC of monitoring data, internal audit of monitoring data.	Skype video call
3.	Rupesh Naidu	Ferral Commerce (external monitoring agency)	Ex-post monitoring survey, water boiling test discussion and their procedure, training of the personnel involved in the survey	Skype video call
4.	Kiran Kumar	Ferral Commerce (external monitoring agency)	Ex-post monitoring survey, water boiling test discussion and their procedure, training of the personnel involved in the survey	Skype video call
5.	Guna Shekhar	Ferral Commerce (external monitoring agency)	Ex-post monitoring survey, water boiling test discussion and their procedure, training of the personnel involved in the survey	Skype video call
6.	Dharma Naik	Ferral Commerce (external monitoring agency)	Ex-post monitoring survey, water boiling test discussion and their procedure, training of the personnel involved in the survey	Skype video call
7.	MS#1- Vallai, Katheri Kaveri Pattanam, Tamilnadu EG1J138032 (G3300), Vintage 2012 Survey Date - 27-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
8.	MS#1, Pallavi, Gujulavai Palli MadannaPalli A P, Andhra Pradesh, F-15-10112 (PCS-1), Vintage - 2015, Survey	Sample end user	Results of Ex-post monitoring survey	Skype video call



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	Date - 19/10/2018			
9.	MS#2, Murugammal w/o Shankar, Bargur1, Krishnagiri District., Tamil Nadu, EG1J132137 (G3300), Vintage 2013, Survey date- 23-10-2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
10	MS#2, Mamatha, Madannapalli AP, Andhra Pradesh, F-15-12673 (PCS-1), vintage - 2015, Survey date - 21/10/2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
11	MS#2, Usha w/o Shivakumar, Sampangi M/M, Bandapalli, Bargur1, Krishnagiri District., Tamil Nadu, B-16-3210 (PCS-1), Vintage 2016, Survey date - 23/10/2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
12	MS#1, Selvi, Kamavapatti Kaveri Pattanam, Tamil Nadu, EG1J200665 (G3300), Vintage 2013, Survey Date - 27-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
13	MS#2, Shakar, Pulaguravand Palli Madannapalli, Andhra Pradesh, F-15-12851 (PCS-1), Vintage 2013, Survey date - 19/10/2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
14	MS#1, Sudha, Kamavapatti Kaveri Pattanam, Tamil Nadu, EG1J195706 ( G3300), Vintage 2012, Survey date - 27-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
15	MS#2, LakshmiKanth, Abbugandhi Vayalpad AP, Andhra Pradesh, F-15-12093 (PCS-1), Vintage 2016, Survey date - 19/10/2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
16	MS#1, Rani, Katheri Kaveri Pattanam, Tamil Nadu, EG1J200518 (G3300), Vintage 2013, Survey date -	Sample end user	Results of Ex-post monitoring survey	Skype video call



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	27/10/2018			
17	MS#3 Thimmakkal, Desipalli Palli Varkana Palli Krishna Giri, Tamil Nadu, A-15-7627 (PCS-1), Vintage 2015, Survey Date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
18	MS#3, Kalapanna, Desipalli Palli Varkana Palli Krishna Giri, Tamil Nadu, B-15-4239 (2015), Vintage 2015, Survey date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
19	MS#3, Hamsaveni, Desipalli Palli Varkana Palli Krishna Giri, Tamil Nadu, G-15-0281 (PCS-1), Vintage 2015, Survey Date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
20	MS#3 , Malika, GuruvinaayakaPalli Varkana Palli Krishna Giri, Tmilnadu, K-14-6524 (PCS-1)Vintage 2015 , Survey date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
21	MS#2, Sureka, Pulaguravand Palli Madannapalli, Andhra Pradesh, F-15-12601 (PCS-1), vintage 2013, Survey date - 19-10-2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
22	MS#3, Malliga, Desipalli Palli Varkana Palli Krishna Giri, B-15-5410 (PCS-1), Vintage 2015, Survey Date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
23	MS#3, Murugammal, GuruvinaayakaPalli Varkana Palli Krishna Giri, Tamilnadu, D-15-3241 (PCS1), Vintage 2015, Survey Date-20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
24	MS#2, SujathA Nayak, Idukunji Post Honnavar Taluk, F-15-10710	Sample end user	Results of Ex-post monitoring survey	Phone call



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	(PCS1) Vintage 2014, Karnataka, survey date- 31-10-2019			
25	MS#3, Kalavani, Kammana Palli Varkana Palli Krishna Giri, Tamil Nadu, K-13-6251 (PCS 1) Vintage 2014 Survey date -20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
26	MS#3, Shantha, Kathalamedu Varkana Palli Krishna Giri, Tamil Nadu, L-14-8271 (PCS 1) Vintage 2015, Survey date - 20-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
27	MS#1, Shanthi w/o Raja, Desipalli, Varatanapalli, Krishnagiri District., Tamilnadu, F-13-5847 (PCS1), Vintage 2013, purchase date -24-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
28	MS#1, Mahadevi T Nayak, Shalimuki Balkur Post Honnavar Taluk, Karnataka, F-15-10652 (PCS 1), Vintage 2014, Survey date -31-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
29	MS#2, Srinivasalu, Makalavali Palli Madanna Palli, Andhra Pradesh, F-15-10281 (PCS 1) Vintage - 2015, Survey date - 19-10-2019	Sample end user	Results of Ex-post monitoring survey	Skype video call
30	#3, Auja, Kathwadipura Nanjangud, Karnataka, G-16-4231 (PCS 1), Vintage 2016 Survey date - 23-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype video call
31	MS#1, Sarojamma, Kothapete Village Srinivasa Pura Taluk, Karnataka, F-15-10601 (PCS 1), Vintage 2013, Survey date - 22-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
32	MS#3, Jayamma, Chamalapura Hundi	Sample end user	Results of Ex-post monitoring survey	Skype video call



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	Nanjangud, Karnataka, B-16-1297 (PCS-1), Vintage- 2015 Survey Date - 23-10-2020			
33	MS#1, Harish K E, Kokabalapalli Village Srinivasa Pura Taluk, Karnataka, F-15-10752 (PCS1), Vintage 2016, Survey Date- 22-10-2018	Sample end user	Results of Ex-post monitoring survey	Skype video call
34	MS#3, Lakshmana, Kesergere, malur taluk, masti hobli, Karnataka, B-16-1122 (PCS 1), vintage -2015, Survey date -26-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
35	MS#3, Uma Shankar, R Makkanahalli, Masti Hobli, Karnataka, B-16-1365 (PCS1), vintage - 2015, date of survey - 27-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
36	MS#3, Govindappa, Vardapura, Masti Hobli, Karnataka, B-16-1232 (PCS1), vintage -2014, date of survey -27-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
37	MS#3, N Gopalraju, N Mallandarahalli Hariti Post Kolar Taluk, Karnataka, B-16-1302 (PCS1), vintage 2015 Date of survey 27-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
38	MS#3, Thirumalesh, Bethmangala, Kysambala Road, Kolar Dist, Karnataka, B-16-1421 (PCS1), vintage -2016, date of survey -23-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
39	MS#3, Nanjundappaa, Mavalhalli post, Bangarpet taluk, Kolar Dist, Karnataka, B-16-1385 (PCS1), vintage - 2015, date of survey - 26-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call
40	MS#3, Lakshminarayanappa,	Sample end user	Results of Ex-post monitoring survey	Skype audio call

	Mavalhalli post, Kolar Dist, Karnataka, B-16-1008 (PCS1), vintage - 2015, date of survey - 26-10-2020			
41	MS#3, Chalapathi, Mavalhalli post, Bangarpet taluk, Kolar Dist, Karnataka, B-16-1480 (PCS1), vintage - 2015, date of survey - 26-10-2020	Sample end user	Results of Ex-post monitoring survey	Skype audio call

Through the above-mentioned activities, the verification team confirmed the following Gold Standard project aspects in relation to the project activity:

- The implementation and operation of the project activity is as described in the monitoring plan in the registered PoA-DD /B01/.
- The operational and data collection procedures are implemented as per the monitoring plan in the PoA-DD /VPA-DDs /B01/, /B02/.
- The information flow for generating, grouping and reporting of the monitored parameters.
- Procedures to avoid double counting are in place.

## A.2. Sampling approach

The total population of the stoves distributed under VPA 6 - 11 together is 212,513 units which as per their date of distribution, operational lifetime and expiries have been considered for ER as follows:

Monitoring Session	ICS considered for ER calculations
MS#1	192,550
MS#2	149,168
MS#3	87,280

The monitoring parameters to be monitored through the sampling plan as per revised and approved PoA-DD/CPA-DDs /B01/, /B02/ are:

### 1. Parameter $\eta_{new}$

Efficiency of the system being deployed as part of the project activity

### 2. Parameter “N<sub>all</sub>”

Total Number of stoves credited in year y

### 3. Parameter “SOF”

Stove Operation Fraction - To determine only stoves that are still operating, measured ex-post through survey

### 4. Parameter “D<sub>traditional\_stove</sub>”

Disposal/Discontinuation of traditional cookstove

### **Sustainability Monitoring Plan (links the parameter already monitored to the closest, most relevant SDG Target as per GS4GG requirements)**

Verification team has cross checked the field survey records, Water boiling test records during remote interviews with the PP, HHs on sampling basis where the monitoring survey was conducted. Based on the records and information collected on each parameter by DOE



during the remote interviews, it is concluded whether the values determined and stated in the monitoring report for following parameters are appropriate and correct.

**1. Relevant SDG Indicator: 1.4.1 Proportion of population living in households with access to basic services**

Parameter "BSA"

Description: Access to Basic Services (Number of ICS distributed under the project)

This parameter was verified by checking ICS sales record /02/.

**2. Relevant SDG Indicator: 1.4.1 Proportion of population living in households with access to basic services**

Parameter "HHS"

Description: Household Savings

This parameter was verified by checking Ex-post monitoring surveys of ICS user records to assess claimed time / money saving due to reduced fuel consumption with project ICS/07/.

**3. Relevant SDG Indicator: 3.9.1 Mortality rate attributed to household and ambient air pollution**

Parameter "SPMHH"

Description: Reduction in Smoke / PM emissions

This parameter was verified by checking Ex-post monitoring surveys of ICS user records to assess mentioned reduction in smoke and soot while cooking with project ICS/07/.

**4. Relevant SDG Indicator: 7.1.2 Proportion of population with primary reliance on clean fuels and technology**

Parameter "ACS"

Description: Affordable and clean energy services

This parameter was verified by checking Ex-post monitoring surveys of ICS user records/07/.

**5. Relevant SDG Indicator: 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities**

Parameter "QE IG"

Description: Quantitative employment and income generation

The parameter was verified by the review of CME's internal HR records from the database and review of sales and marketing records for number of direct/indirect employment generation/08/.

Standard auditing techniques were applied by CCIPL to assess and verify the quality of information provided during the course of verification.

A cross CPA single sampling and monitoring was undertaken by the CME for the following:

- MS#1 (Surveys and Water Boiling Tests) conducted during Oct-Nov 2018
- MS#2 (Surveys and Water Boiling Tests) conducted during Oct-Nov 2019
- MS#3 (Surveys) were conducted during conducted during Oct-Nov 2020.

The verification team applied a sampling approach for remote interview as part of verification in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 08.0. In accordance with the paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team and accordingly steps listed in paragraph 29 of the sampling standard was followed. So, in accordance with paragraph 39 (c) of sampling standard the Verification team opted for AQL of 1.0% and UQL of 20%; producer risk of 10 % and consumer risk of 10 % in determining the DOE's sample size for which the sample size is 18 with acceptance number 1. The verification team decided to conduct the remote audit for 18 households for MS#1 and MS#2



together and 18 households for MS#3 from the PP's sample size for the PoA for the monitoring period with acceptance number (c) as 1. The reason for considering MS3 individually for the audit is based on the fact that the CME had conducted remote monitoring for MS3, hence the verification team decided to audit more samples from MS3, relative to that for MS1 and MS2 which were monitored by CME via physical visits to these locations.

Based on the review of monitoring report/01/ and remote interviews, verification team noted that CME has conducted survey and WBT physical for MS#1 and MS#2 only. Furthermore, for MS#3 only telephonic surveys were conducted and no WBT were performed. However, CME has submitted deviation request dated 05/02/2021 issued from GS/B10/ which allows CME to carry out usage rate monitoring remotely with taking into consideration the GS recommendations. During the remote interview of MS#3 samples, the verification team confirmed with the end user that telephonic survey calls were received. Based on the review of monitoring survey sheet and remote interview observations, verification team confirms that following GS deviation recommendations were adhered by the CME.

- The household monitoring survey were conducted with the primary cook only.
- The project applied conservative values for the usage rate relative to previous monitoring period.
- The remote monitoring survey results were compared with the usage rate estimated based on previous monitoring events. The conservativeness of the monitored parameter obtained using remote surveys has been established in section D.3 of the MR.
- The actual sample size for carrying out remote usage surveys is 10% greater than the calculated sample size.

Furthermore, for WBT of MS#1 and MS#2, the Verification Team during the course of remote audit, also interviewed the WBT households to ascertain the authenticity and validity of the WBTs conducted. All the interview calls were video calls (as possible) wherein the verification team was able to verify the serial number and model of the ICS as well as interview the user, check presence of other stoves (project or baseline) in the kitchen etc. All audit calls were recorded.

Additionally, for MS#3 instead of conducting WBT, the CME has conservatively determined the efficiency of the project devices by applying the linear degradation approach based on past trend, as stated in para 37(a) of AMS-II.G (version 12.0), which adheres to the approved deviation request submitted the CME.

## **Resolution of outstanding issues**

The objective of this phase of the verification is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which have to be clarified/corrective action done prior to final GS VVB's conclusions on the project implementation, monitoring practices and achieved emission reductions. In order to ensure transparency a verification protocol is completed for the project activity. The protocol shows in transparent manner criteria (requirements), means of verification and resulting statements on verification actual project activity against identified criteria.

The verification protocol serves the following purposes:

- It organises in a table form, details and clarifies the requirements, a GS project is expected to meet GS4GG requirements/B09/;
- It ensures a transparent verification process where the GS VVB will document how a particular requirement has been verified and the result of the verification.



- It ensures that the issues are accurately identified, formulated, discussed and concluded in the validation report.
- It ensures the determination of achieving credible emission reductions from the project activity.

The verification protocol consists of two tables. Table 1 reflects the verification requirements and reference to the materials used to verify the project activity against those requirements, as well as means of verification, reference to Table 2 (i.e. tables of findings) and preliminary and final opinion of the GS VVB on every particular requirement listed in table 1.

<b>Verification Protocol Table 1: Requirement checklist</b>				
<b>Checklist question</b>	<b>Verification Team Comment/MoV</b>	<b>Reference</b>	<b>Findings comments references, data source / Draft Conclusion</b>	<b>Final Conclusion</b>
<i>The checklist items in Table 1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the Verification team and how the assessment was carried out. The reporting requirements of the VVS and Project Standard shall be covered in this section.</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR is raised (see below). The assessment refers to the draft verification stage.</i>	<i>In case a corrective action or a clarification request the final assessment at the final verification stage is given.</i>

The findings of verification process are summarized in the tables below.

<b>CAR/ CL/ FAR ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of CAR/ CL/ FAR</b>				
<b>CME response</b>				
<b>Date:</b> DD/MM/YYYY				
<b>Documentation provided by the CME</b>				
<b>GS VVB assessment</b>				
<b>Date:</b> DD/MM/YYYY				

**Corrective action requests (CARs) are raised**, in case:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;



- (c) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- (d) Issues identified in a FAR during validation/previous verification(s) that are not been resolved by the project participant(s) to be verified during current verification.

**Requests for clarification (CLs) are raised** if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

**A forward action request (FAR) is raised** during verification to highlight issues related to project implementation/monitoring that require review during the subsequent verification of the project activity. FARs shall not relate to the CDM requirements for issuance.

### Internal quality control

The final verification report has passed a technical review before being submitted to the project participant(s) and GS4GG Certification Team / Board. The technical review was performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for GS4GG validation and verification.

### Verification Team

Carbon Check has appointed a competent team as per the Accreditation Standard and Carbon Check internal procedures, the team is outlined below:

Verification Team		Type of Involvement							
Full name	Appointed for Sectoral Scopes (Technical Areas)	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer	Trainee Assessor
Sanjay Kumar Agarwalla	1.1, 1.2, 2.1, 3.1, 4.1, 5.1, 5.2, 9.1, 9.2, 13.1	X	X	X	X	X	X		
Priya Suman			X	X			X		X
Vikash Kumar Singh	1.2,3.1,8.1,13.1,14.1							X	

**Sanjay Kumar Agarwalla:** Sanjay Kumar Agarwalla: He is an appointed Team Leader and Technical Expert for technical area 1.1, 1.2, 2.1, 3.1, 4.1, 5.1, 5.2, 8.1, 9.1, 9.2 and 13.1. He is having more than 20 years of experience, which involves more than 10 years of industrial experience and almost ten years in climate change. He worked in various capacities at Kesoram Rayon, Durgapur Chemicals Limited, Gensol Consultants, TUV Rheinland India Pvt. Ltd. and LRQA. He is involved in more than 70 GHG audits including validation/verification/post registration changes. He also has GS4GG Audit Experience and attended the requisite Gold Standard webinars. The GS projects on which he has worked are 1309, 850, 6191, 411, 1353 and 939.

**Priya Suman:** Priya is qualified as Trainee Auditor in TA 1.2 and 3.1. She has also attended Several Gold Standard DOE webinar trainings including training on GS4GG.

**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) 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.

He has also attended Several Gold Standard DOE webinar trainings including training on GS4GG.

### 3. VERIFICATION FINDINGS

The findings of the verification are described in the following sections. The verification criteria (requirements), the means of verification and the results of verification are documented in detail below.

#### Project implementation

The PoA has 13 VPAs included. The ICS distributed in VPA 01-05 have already expired their rated operational lifetime, hence are not covered in the concerned monitoring report. VPA 12-13 are sponsored VPAs and hence are managed separately wrt to monitoring and verification purposes. Hence, the implementation of the project activity is being discussed below only wrt to VPA 06 – 11:

<b>Project Participants:</b>	Envirofit International Limited
<b>Title of PoA:</b>	The Breathing Space Improved Cooking Stoves Programme, India
<b>GS registration No:</b>	- PoA – GS 916 - VPA 06 – GS 3364 - VPA 07 – GS 3365 - VPA 08 – GS 3366 - VPA 09 – GS 3367 - VPA 10 – GS 4291 - VPA 11 – GS 5046
<b>Applied Baseline and monitoring methodology:</b>	AMS-II.G. Version 03 /B05/
<b>Project Scale:</b>	Small scale
<b>Location of the project activity:</b>	India
<b>Project's crediting period:</b>	- VPA06: 28/11/2012 – 27/11/2022 - VPA07: 28/11/2012 – 27/11/2022 - VPA08: 17/03/2013 – 16/03/2023 - VPA09: 30/09/2013 – 29/09/2023 - VPA10: 16/08/2015 – 15/08/2025 - VPA11: 22/09/2015 – 21/09/2025
<b>Reported monitoring Period verified in this verification:</b>	01/08/2017 to 31/07/2020, Both days inclusive

As part of the remote site visit, the verification team was able to confirm that the project implementation is in accordance with the project description contained in the registered PoA-DD and VPA-DDs/B01/, /B02/

<p><b>Project physical features (technology, project equipment, monitoring and metering equipment)</b></p>	<p>Review of monitoring report reveals that the objective of the PoA is to distribute improved cook stoves (ICS) to domestic households in India. Envirofit is the coordinating/ managing entity (CME) for the programme. Thirteen VPAs have been included in the program /B01/ The PoA aims to support sustainable development in the host country, India. The implementation of ICSs has improved the environment and quality of indoor air in individual household by reduction in smoke, black soot and particulate matter emissions. The VPAs of the PoA involves number of stove models however emission reduction during the reported monitoring period are being claimed on G3300 and PCS1 model of ICS /03/.</p> <p>These Improved biomass cook stoves are built to reduce the use of wood and therefore related indoor air pollutants viz., CO and PM, which result from incomplete combustion of fuel wood. This project reduces greenhouse gas emissions by disseminating efficient biomass cook-stoves, which are more efficient than three stones and other traditional stoves as verified during onsite observation and interview with household users.</p>	
<p><b>Any Project Design Change been sought and approved by EB for the project?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>No change sought</p>

Project activity is implemented in line with the registered GS PoA-DD/VPA-DDs/B01/, /B02/. Verification team reviewed the ER spread sheet /02/ and found that a total 212,513 cookstove units were distributed/sold under the VPAs covered in the monitoring report.

Under the concerned VPAs, the stove types distributed within the geographical boundary of India are single pot type: G3300, M5000 and PCS1 /03/. The total number of stoves sold in the VPAs is 212,513/02/. The table below provides break-up of cook stove for which credits are being claimed during the reported monitoring period (based on their date of installation, rated operational lifetime and expiries):

**Summary of ICS that are covered in this monitoring period**

For MS#1 <sup>2</sup>			
VPA number	G3300	PCS1	Grand Total
GS 3364 VPA 06	6,697	-	6,697
GS 3365 VPA 07	33,332	-	33,332
GS 3366 VPA 08	8,180	24,003	32,183
GS 3367 VPA 09	3,214	33,666	36,880
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>51,423</b>	<b>141,127</b>	<b>192,550</b>

<sup>2</sup> Over the monitoring period, three annual monitoring events were conducted each corresponding to an annual monitoring period (i.e., First Monitoring Session (MS#1) covering 01 Aug 2017 – 31 Jul 2018, Second Monitoring Session (MS#2) covering 01 Aug 2018 – 31 Jul 2019 and Third Monitoring Session (MS#3) covering 01 Aug 2019 – 31 Jul 2020).



For MS#2			
VPA number	G3300	PCS1	Grand Total
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	4,827	24,003	28,830
GS 3367 VPA 09	3,214	33,666	36,880
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>8,041</b>	<b>141,127</b>	<b>149,168</b>

For MS#3			
VPA number	G3300	PCS1	Grand Total
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	-	-	-
GS 3367 VPA 09	2,067	1,755	3,822
GS 4291 VPA 10	-	41,015	41,015
GS 5046 VPA 11	-	42,443	42,443
<b>Grand Total</b>	<b>2,067</b>	<b>85,213</b>	<b>87,280</b>

The total number of cook-stoves sold in the VPAs was verified through review of stoves sale data base /04/.

During remote interview, verification team checked the design and technology of stoves of different users, which are in line with the description provided in registered PoA-DD/VPA-DDs /B01/ ,/B02/ and technical drawing /03/ provided by the PP. There were no changes observed from the registered monitoring plan of the registered PoA-DD and VPA-DDs /B01/, /B02/. Monitoring procedure of GHG data is found sufficient and in accordance with the procedures stipulated under the registered monitoring plan.

The project activity was implemented and stoves installed as described in the registered PoA-DD and VPA-DDs. The starting date i.e., the start of sale of ICS for each VPA is as follows:

- VPA06 – 01/11/2011
- VPA 07 – 31/08/2012
- VPA 08 – 17/03/2013
- VPA 09 – 30/09/2013
- VPA 10 – 05/05/2014
- VPA 11 – 22/05/2015

On the basis of remote interview and the reviewed project documentation along with documentary evidences, it can be confirmed that the project implementation is in accordance with registered PoA DD/B01/, VPA DDs/B02/ and GS4GG Transition Annex AA/B04/. The project has been implemented and operated as described in the registered PoA-DD/B01/ and corresponding VPA-DDs/B02/. The GHG related parameters and sustainable development indicators are also monitored as per the registered PoA-DD/VPA-DDs/ GS4GG Transition Annex AA /B01/, /B02/, /B04/ and approved GS Passport/B11/ and is found to be appropriate.

Verification team reviewed the validation report (inclusion of VPA06 to VPA11)/B02/ and confirms that the waiver of emission reduction credits can be done during SFR or through warranty cards, customer agreements or by any other appropriate means. Based on interview with PP during remote interview and further interviewing end users it can be confirmed that the transfer of ownership of credits is being communicated to them. Furthermore, the



verification team reviewed photos of the box packaging/12/, which were found to contain a carbon waiver disclaimer stating 'Price includes waiver against future carbon credits from this product (cook stove)'. Moreover, VPA passports also include a stakeholder feedback on the issue of transfer of issue of ER credits. The verification team also verified the presence of warranty cards/12/ at the households at the time of remote audit surveys (video calls). The verification team considers the above as an appropriate measures taken by PP to spread awareness amongst its end users regarding right of use or waiver of all ER resulting from usage of cook stoves.

Verification team has also assessed the monitoring and impact on the sustainable development indicators by the project implementation and found them to be appropriate as per the approved GS Passports /B11/.

Carbon Check's verification team considers the project description of the project contained in the registered SSC PoA-DD and VPA-DDs /B01/,/B02/ to be complete and accurate. The SSC PoA-DD and VPA-DDs /B01/,/B02/ complies with the relevant methodology /B03/, tools, forms and guidance at the time of submission for registration.

### **The actual operation of the Gold Standard programme of activity**

The starting date of the PoA is 10/05/2008, the day on which the first cook stove (type B1100) was first disseminated in VPA 01. The total number of cook-stoves sold during the reported monitoring period has been verified from stoves sale data base /04/.

Operation of the devices was confirmed during the remote interview by the verification team as follows via verifying:

- Actual implementation of the stoves
- Household-representatives were interviewed regarding the usage of stove
- Household-representatives were interviewed to confirm if baseline technology is still in use or not.
- Process of data collection during installation of stove.
- Agreements/warranty cards/ carbon rights waiver communication between households and Project Participant.

Carbon Check's verification team confirms that the project activity is implemented within the boundary of the project activity as described in the PoA-DD and VPA-DDs /B01/, /B02/ and the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PoA-DD and VPA-DDs /B01/, / B02/.

In summary, the operation of the project activity is in accordance with the registered PoA-DD /B01/.

### **Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)**

The monitoring has been carried out in accordance with the monitoring plan contained in the registered PoA-DD /B01/ and the VPA-DD /B02/.

During the course of verification, all relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement method and applied QA/QC procedures. According to the methodology, a Total Sales Record, Detailed Customer Database, and Project Database are maintained.



The verification team reviewed the monitoring plan in the PoA-DD /B01/ and compared it against the requirements of the applied methodology /B05-2/ and confirms that appropriate provisions are included for the monitoring and reporting procedures, data management, and QA/QC procedures, including maintaining the detailed customer database and project database and found in line with the requirements of CDM VVS for PoA (version 02.0) /B05-1/ and GS4GG requirements /B09/.

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology/ B05/ and registered PoA-DD/VPA-DDs /B01/, /B02/. The PP has appropriately performed Stratified random sampling procedure in line with the applied methodology and deemed suited for this type of project. As the registered PoA-DD /B01/ mentions the option for stratified sampling procedure, it is acceptable to the verification team, since the geographical boundary and the ICSs dissemination have been done in the stratified and varied population. This is in compliance with the sampling standard /B08/.

Verification team confirms that the sampling conducted by the PP is in conformance with the Standard for Sampling and Survey for CDM project activities and programme of activities, version 8.0 requirements /B08/. Verification team reviewed the snap shots of random number generator /13/ and confirms that the end users have been selected at random and without any bias. Furthermore, based on review of the ex-post monitoring survey records /07/ , the verification team confirms that the sampling survey covered end users covered in the VPA. Thus, the survey design covers the region of distribution of the population (within the geographical boundary) and is representative in nature.

The verification team thus confirms that the sampling plan ensures that:

- Samples are randomly selected
- Samples are representative of the population

The sampling survey has been carried out by the well-trained people in Envirofit, which has been certified by the PP as a proof of training /09/.

As per the Gold Standard 8 weeks review synthesis report (during validation), it has been confirmed that instead of using the country average value, state specific values of  $f_{NRB}$  have been applied for ER calculations at the time monitoring and verification. Verification team based on review of Monitoring report confirms that the  $f_{NRB}$  is weighted based on the state-wise ICS distribution proportion relative to ICS population installed in the PoA.

Monitoring Session	$f_{NRB,y}$ (fraction)
MS#1	0.890
MS#2	0.896
MS#3	0.902

CC IPL confirms with a reasonable level of assurance that the claimed emission reductions are free from material errors, omissions or misstatements.

## Monitored Parameters

### EX-Post Parameters:

#### a. Efficiency of the system being deployed as part of the project activity ( $n_{new}$ ):

Water Boiling Tests have been performed by the Envirofit to determine the value of  $\eta_{new}$  vintage wise and stove model wise. The WBT has been conducted for the 29 samples (15 for MS#1 and 14 for MS#2) selected combined from all six VPAs (VPA 06 to 11). The verification



team based on review of submitted WBT report /06/ has assessed this and cross-verified the details during the remote interview. The WBT has been performed by the trained personal of Feral Commerce which is an external monitoring agency hired by Envirofit /09/ to conduct the monitoring. Below table provides verified<sup>/06/</sup> value of  $\eta_{new}$ :

MS1			
Stove Serial Number	Stove Model	Year	Thermal Efficiency (%)
EG1J195706	G3300	2012	21.33%
EG1J138032	G3300	2012	21.52%
EG1J200665	G3300	2013	21.96%
EG1J200518	G3300	2013	22.05%
EG1J195985	G3300	2014	22.35%
EG1J200932	G3300	2014	22.43%
F-15-10601	PCS1	2013	22.30%
F-13-5847	PCS1	2013	22.34%
F-15-10962	PCS1	2014	22.81%
F-15-10652	PCS1	2014	22.95%
F-15-3928	PCS1	2015	23.35%
F-15-10112	PCS1	2015	23.51%
F-15-4831	PCS1	2015	23.44%
F-15-10752	PCS1	2016	23.92%
F-15-10861	PCS1	2016	24.06%

MS2			
Stove Serial Number	Stove Model	Year	Thermal Efficiency (%)
EG1J140474	G3300	2013	21.44%
EG1J132137	G3300	2013	21.55%
EG1J183067	G3300	2014	21.89%
EG1J151872	G3300	2014	21.81%
F-15-12851	PCS1	2013	21.69%
F-15-12601	PCS1	2013	21.82%
B-16-1167	PCS1	2014	22.22%
F-15-10710	PCS1	2014	22.33%
F-15-10580	PCS1	2014	22.47%
F-15-12673	PCS1	2015	22.77%
F-15-10281	PCS1	2015	22.94%
F-15-12611	PCS1	2015	22.84%
F-15-12093	PCS1	2016	23.53%
B-16-3210	PCS1	2016	23.43%

WBT was conducted for MS#1 and MS#2 /06/ furthermore, for MS#3 the CME has conservatively determined the efficiency of the project devices by applying the linear degradation approach based on past trend, as stated in para 37(a) of AMS-II.G (version 12.0), which adheres the approved deviation request /B10/ submitted the CME.

The WBT protocol adopted by PP was found to be appropriate and in conformance with the accepted international standards (WBT Test Protocol verion 4.2.3)/06/. WBT has been conducted using measuring equipment like thermometers, weigh scales and wood moisture content meters /14/. As per the registered monitoring plan in case where survey results indicate that desired precision is not achieved, the lower bound of confidence interval of the parameter value would be used. PP has provided a table “Monitoring results and Reliability Check - Efficiency” in work sheet “Sampling & Results” of the ER spread sheet, the same confirms that the survey results met the desired precision and hence consideration of lower bound of confidence interval of the parameter is not required to be consider; checked and confirmed by the verification team. The sampling plan followed for conducting WBT was found to be appropriate and in conformance with the requirements of the guideline “Sampling and surveys for CDM project activities and programmes of activities”. Version 4.0/B07/ and Standard “Sampling and surveys for CDM project activities and programmes of activities”. Version 8.0/B08/

## b. Total Number of stoves sold ( $N_{all}$ ):

The total number of cook-stoves sold during monitoring period verified from stoves sale data base/02/,/04/. The total number of cook stove for which emission reductions are claimed during the reported monitoring period of the PoA is as below, checked and confirmed by the verification team:

MS#1 – 192,550

MS#2 – 149,168

MS#3 – 87,280

## c. Stove Operation Fraction (SoF):

SoF is the average fraction of stoves found operating in a VPA in a given year also taking into consideration the portion of year for which it has operated. Ex-post survey report /07/ is found acceptable for determining the values for each VPAs. This has been cross-verified by the verification team during the on-site visit /07/. Following are the survey result:

Monitoring Session	SoF (Fraction)
MS#1	0.818
MS#2	0.802
MS#3	0.796

The SoF has been calculated using sampling survey as a fraction of stoves found operating Vs total number of stoves sampled for each sampling stratum. PP has calculated the SoF in ER spread sheet, the calculation takes into the account of following dependents as verified from the ER spread sheet:

- ✓ Ex-post survey results confirming if the ICS is still operational
- ✓ SoF Sample Size required
- ✓ Model of the cookstove along with the unique serial number of the same.
- ✓ Year of installation

As per the registered monitoring plan in case where survey results indicate that desired precision is not achieved, the lower bound of confidence interval of the parameter value would be used. PP has provided a table “*Monitoring results and Reliability Check – SoF*” in work sheet “*Sampling Size Cal & Results*” of the ER spread sheet, the same **confirms that the survey met the** desired precision and hence consideration of lower bound of confidence interval of the parameter is not required to be consider; checked and confirmed by the verification team.

## d. Disposal/Discontinuation of traditional cookstove

Extent of continued usage of traditional stoves along with ICS is as following

Monitoring Session	$D_{\text{traditional\_stove}}$ (Fraction)
MS#1	0.964
MS#2	0.945
MS#3	0.944

The same has been verified through survey records /07/ and acceptance sampling based remote audit. This fraction has been used by the PP to adjust  $Q_{\text{biomass}}$ , which gets adjusted from ex-ante fixed value of 1.915 tonnes per annum.

In summary, the verification team confirms that all the ex-ante and ex-post parameters are monitored in accordance with the approved monitoring plan and applied methodology.

### Ex-Ante Parameters:

<b>Parameter:</b>	$Q_{\text{biomass}}$
<b>Default values used:</b>	1.915 (ex-ante value as per the VPA DDs)
<b>Purpose of data</b>	Baseline calculations
<b>Source and Verification of the source</b>	<p>Envirofit brochures, cross checked from the registered VPA-DDs/B01/</p> <p>The parameter , fraction of extent of continued usage of traditional stoves along with ICS is reported as 0.237 and the same has been verified through survey records /07/. This fraction has been used by the PP to adjust <math>Q_{\text{biomass}}</math>, which gets adjusted to 1.847 tonnes per annum, 1.809 tpa and 1.808 tpa from ex-ante fixed value of 1.915 tonnes per annum for MS#1, MS#2 and MS33 respectively.</p>

<b>Parameter:</b>	$EF_{\text{projected\_fossil fuel}}$
<b>Default values used:</b>	81.6
<b>Purpose of data</b>	Baseline calculations
<b>Source and Verification of the source</b>	AMS-II. G (version 03), page 2

<b>Parameter:</b>	$\eta_{\text{old}}$
<b>Default values used:</b>	0.1
<b>Purpose of data</b>	Baseline calculations
<b>Source and Verification of the source</b>	AMS-II. G (version 03)

<b>Parameter:</b>	LAF
<b>Default values used:</b>	0.95
<b>Purpose of data</b>	Baseline calculations
<b>Source and Verification of the source</b>	AMS-II. G (version 03)

<b>Parameter:</b>	$NCV_{\text{biomass}}$
<b>Default values used:</b>	0.015
<b>Purpose of data</b>	Baseline calculations
<b>Source and Verification of the source</b>	AMS – II. G (version 03), page 2

<b>Parameter:</b>	$f_{\text{NRB},y}$	
<b>Default values used:</b>	<b>Monitoring Session</b>	<b><math>f_{\text{NRB},y}</math> (fraction)</b>
	MS#1	0.890
	MS#2	0.896
	MS#3	0.902
<b>Purpose of data</b>	Baseline calculations	

<b>Source and Verification of the source</b>	The $f_{NRB}$ value is the weighted average value based on state-wise distribution of sales under each monitoring session and cross checked from the registered PoA-DDs/B01/
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### 3.6 Monitoring responsibility

Verification team assessed the management systems of implemented monitoring plan of the project activity. The management system includes the organizational structure, roles and responsibilities, data collection, transfer and aggregation procedures, training of personnel /09/, data storage and archiving and emergency procedures for the monitoring system. Based on remote interview with the employees of Envirofit International (involved in the project monitoring and data collection, inspection of data storage log book & equipment's and document review) Carbon Check confirms that the responsibilities and authorities for monitoring and reporting are appropriate and effective for the project type and hence in accordance with monitoring plan of the registered PoA-DD/B01/ and applied monitoring methodology/B05-2/.

#### 3.6.1 Accuracy of equipment

As per the registered monitoring plan as contained in the PoA-DD and VPA-DDs, no monitoring equipment for the project requires calibration, given the CME has used newly purchase equipment for conducting WBTs/14/; hence assessment of accuracy and calibration of the monitoring equipment is not applicable. The verification team reviewed the equipment purchase invoices/14/ and confirm that the equipment used to perform WBT are brand new.

### 3.7 Deviation from and/or Revision of the registered monitoring plan

This is the fourth periodic verification of the PoA and after a thorough assessment during documents review, remote interview with the local stakeholders (HHs/end users) it can be concluded that there has not been any deviation and/or revision of the registered monitoring plan.

### 3.8 Assessment of data and calculation of greenhouse gas emission reductions

The Project Proponent submitted all the relevant data and parameters required to be monitored to the verification team along with the monitoring report. All the monitoring parameters are as per the registered PoA-DD/VPA-DDs and have been monitored and reported in the monitoring report. CCIPL reviewed the calculation worksheet /02/ for the emission reduction calculation for the monitoring periods 01/08/2017 to 31/07/2020 (VPA06 to VPA11). CCIPL confirms that the formulas, conversions, aggregations and factors are consistent with the monitoring plan in the PoA-DD/B01/ and six VPA-DDs /B02/. The reported data was checked as follows:

- Necessary data for all the parameters required to be monitored in the registered PoA-DD and respective VPA-DDs /B02/ were reviewed to ensure accuracy.
- The Project Sales Database kept electronically /04/ was reviewed along with an interview with the person responsible for data entry and data review from the Envirofit, to confirm the number of stoves sold during the monitoring period. Sample sales invoices/05/ were also assessed for further check.

#### 3.8.1.1 Baseline emissions



The Project Proponent has submitted the spreadsheet showing the detailed calculation of baseline emissions and corresponding emission reduction for all eleven VPAs, i.e. VPA01 to VPA11.

The overall GHG reductions achieved by the project activity in year y are calculated as follows:

$$B_{old} = Q_{Biomass} \times \sum_{N_{all}}^i Stove\ year\ i \times SOF$$

Where,

- $B_{old}$  Quantity of woody biomass used in the absence of project activity (tonnes)
- $Q_{biomass}$  Average annual biomass consumption per appliance (tonnes/ year)
- $SOF$  Stove Operation Fraction (% of stoves operating or replaced by equivalent in-service appliance) – measured ex post using survey/ user feedback.
- $Stove\ year\ i$  Calculated cumulative stove operation years in the monitoring period in year  $i$  for stove in the monitoring period.
- $N_{all}$  Total number of ICS distributed under the VPA (number).

Thus,

$B_{y,savings}$  is estimated using option 2, equation 3 of the methodology AMS-II.G version 3.

$$B_{y,savings} = B_{old} (1 - \eta_{old} / \eta_{new})$$

Where

- $\eta_{old}$  Efficiency of the system being replaced
- $\eta_{new}$  Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more than one type of system is being introduced by the project activity

$$Thus, ER_y = B_{y,savings} * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel} * LAF$$

Where:

- $ER_y$  Emission reductions during the year y in tCO<sub>2</sub>e
- $B_{y,savings}$  Quantity of biomass that is saved in tonnes
- $f_{NRB,y}$  Fraction of biomass saved by the project activity in year y that can be established as non-renewable biomass using survey methods
- $NCV_{biomass}$  Net calorific value of the non-renewable biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)
- $EF_{projected\_fossilfuel}$  Emission factor for the substitution of non-renewable biomass by similar Consumers (Use a value of 81.6tCO<sub>2</sub>/TJ)
- $LAF$  Net to gross Adjustment factor (0.95) applied in accordance with paragraph 13 and 23 of AMS-II. G version 03

The above equation used for the calculation of emission reduction is in line with methodology /B05-2/ and registered PoA-DD/B01/ and eleven VPA-DDs /B02/.

Total verified emission reductions during the reported monitoring period (i.e. 01/08/2017 to 31/07/2020, Both days inclusive, is 323,452 tCO<sub>2</sub>e which is based on the total number of stoves disseminated by VPAs (06 to 11)/02/ and their respective performance over the monitoring period.

### 3.8.1.2 Project emissions

Not Applicable

### 3.8.1.3 Leakage emissions

As per the registered PoA-DD/B01/, the default value of Leakage adjustment factor i.e. 0.95 should be used. PP has used the default value of 0.95 and multiplied it by  $B_{old}$ ; checked and confirmed by the verification team.

## 3.9 Assessment of actual emission reductions with the estimate emission reductions in POA-DD

Estimated emission reduction in the VPA-DDs /B02/ and emission reduction reported in the MR /01/ for the monitoring period was comprehensively assessed by the verification team, through documents review /02/, /06/, /07/ and remote interviews of the households /end users of project technology i.e. cook stoves

Following table provides comparison of estimated/ex-ante value and actual emission reduction value for year 2018, 2019 and 2020 covering the reported monitoring periods:

VPA	Estimated ER within the Monitoring Period tCO <sub>2e</sub>	Actual ER within the Monitoring Period tCO <sub>2e</sub>	Has any increase of ER's occurred?
VPA 06	5,787	1,222	No
VPA 07	24,966	18,400	No
VPA 08	52,295	37,150	No
VPA 09	54,798	55,187	YES
VPA 10	117,879	100,975	No
VPA 11	133,133	110,518	No

In summary, verification team confirms the actual emission reduction is lower than the estimated ERs of all six VPAs for the reported monitoring period. Based on above, verification team concludes that, the cause for the decrease of ER's for the current monitoring is appropriately justified by the PP, same has been verified and acceptable to the Verification team. The increase in achieved ERs for VPA 09 is merely 0.7% than estimated in VPA-DD which is very minor and is not deemed material to necessitate a detailed comparison of ex-ante vs ex-post parameter values. Following is the summary of ER value /02/ calculated:

#### ER summary for MS#1

Parameter	unit	VPA 06		VPA07		VPA 08		VPA 09		VPA 10		VPA 11	
		2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
BE <sub>y</sub>	tCO <sub>2e</sub>	122	0	1229	610	1256	1735	1358	1881	1594	2208	1593	2208
PE <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
L <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
ER <sub>y</sub>	tCO <sub>2e</sub>	122	0.0	1229	610	1256	1735	1358	1881	1594	2208	1593	2208
<b>Total</b>	tCO <sub>2e</sub>	<b>1222.0</b>		<b>18400.0</b>		<b>29920.0</b>		<b>32400.0</b>		<b>38031.0</b>		<b>38018.0</b>	

#### ER summary for MS#2

Parameter	unit	VPA 06	VPA07	VPA 08	VPA 09	VPA 10	VPA 11
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ter		2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
BE <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	7187	43	13005	9568	15266	21152	15260	21145
PE <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
L <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
ER <sub>y</sub>	tCO <sub>2e</sub>	0.0	0.0	0.0	0.0	7187.0	43.0	13005.0	9568.0	15266.0	21152.0	15260.0	21145.0
<b>Total</b>	tCO <sub>2e</sub>	0.0		0.0		7230.0		22573.0		36418.0		36405.0	

### ER summary for MS#3

Parameter	unit	VPA 06		VPA07		VPA 08		VPA 09		VPA 10		VPA 11	
		2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
BE <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	214	0	13630	12896	15113	20982
PE <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
L <sub>y</sub>	tCO <sub>2e</sub>	0	0	0	0	0	0	0	0	0	0	0	0
ER <sub>y</sub>	tCO <sub>2e</sub>	0.0	0.0	0.0	0.0	0.0	0.0	214.0	0.0	13630.0	12896.0	15113.0	20982.0
<b>Total</b>	tCO <sub>2e</sub>	<b>0.0</b>		<b>0.0</b>		<b>0.0</b>		<b>214.0</b>		<b>26526.0</b>		<b>36095.0</b>	

### 3.10 Compliance with the sustainability monitoring plan

Sustainability monitoring plan as contained in the registered PoA-DD /B01/, VPA-DDs/B02/ and Transition Annex AA /B04/ and GS passport /B11/ has been monitored by the PP and the same is provided in the Monitoring report/01/. Sustainability monitoring plan was assessed and verified by the verification team during remote interview and by means of interview with the local stakeholders and Envirofit Personnel (who interacted with the local people before and after implementation of the project for baseline and project field survey and WBTs).

All the non-neutral indicators are monitored by PP and verified by the verification team. Following documents are reviewed during the verification process:

- Ex post Monitoring Survey Questionnaire /07/ sheets
- HR record of employment certificate /08/

### 3.11 Monitoring of Gold Standard Sustainability Indicators

Verification team checked the sustainable development indicator parameters through documents review /03/, /06/, /07/ and remote interviews.

## 4. VERIFICATION FINDINGS

The findings of the verification are described in the following sections. The verification criteria (requirements), the means of verification and the results of verification are documented in detail in the verification protocol in Appendix A.

### Compliance with the sustainability monitoring plan

The monitoring system complies with the sustainable monitoring plan. All the non-neutral parameters have been discussed in the monitoring report. The “way of monitoring” as stated in the revised and approved PoA-DD / VPA-DDs /B01/, /B02/, Transition Annex AA /B04/ and



GS Passports /B11/ has been followed. The monitoring parameters and the data in the SDG matrix have been checked and cross-checked against the supporting documents. All mitigation measures have been put in place to prevent the violation of the “do no harm assessment” or to neutralise an SDG indicator.

## Monitoring of Gold Standard SDG Indicators

Parameters that are monitored in accordance with the monitoring plan for data and parameters monitored and SDG indicators as referred in the GS Transition Annex /B04/

SDG Indicator	Chosen parameter in the registered GS Passport and monitoring report	Way of monitoring	Assessment	Verified Score								
<b>SDG 13: Climate Action</b>	$\eta_{new}$ Efficiency of the system being deployed as part of the project activity	Ex-post Water Boiling Test records	<p>Please refer to section A.2 for the detailed assessment for this parameters. All the sampled households confirmed that WBT were conducted at their site. Furthermore, for MS#3 CME has applied linear degradation approach based on past trend, as stated in para 37(a) of AMS-II.G (version 12.0). The verification team confirms and accept the approach based on the review of ER calculation sheet.</p> <table border="1"> <thead> <tr> <th>Monitoring Session</th> <th>Monitored Efficiency (fraction)</th> </tr> </thead> <tbody> <tr> <td>MS#1</td> <td>0.228</td> </tr> <tr> <td>MS#2</td> <td>0.225</td> </tr> <tr> <td>MS#3</td> <td>0.223</td> </tr> </tbody> </table>	Monitoring Session	Monitored Efficiency (fraction)	MS#1	0.228	MS#2	0.225	MS#3	0.223	+ (Positive)
Monitoring Session	Monitored Efficiency (fraction)											
MS#1	0.228											
MS#2	0.225											
MS#3	0.223											
<b>SDG 13: Climate Action</b>	$N_{all}$ Total Number of stoves credited in year y	Envirofit sales records	<p>Please refer to section A.2 for the detailed assessment for this parameters.</p> <table border="1"> <thead> <tr> <th>Monitoring Session</th> <th>Stoves considered for ER calculations</th> </tr> </thead> <tbody> <tr> <td>MS#1</td> <td>192,550</td> </tr> <tr> <td>MS#2</td> <td>149,168</td> </tr> <tr> <td>MS#3</td> <td>87,280</td> </tr> </tbody> </table>	Monitoring Session	Stoves considered for ER calculations	MS#1	192,550	MS#2	149,168	MS#3	87,280	+ (Positive)
Monitoring Session	Stoves considered for ER calculations											
MS#1	192,550											
MS#2	149,168											
MS#3	87,280											
<b>SDG 13: Climate Action</b>	SOF Stove Operation Fraction - To determine only stoves that are still operating, measured ex-post through survey	Survey	<p>Please refer to section A.2 for the detailed assessment for this parameters.</p> <table border="1"> <thead> <tr> <th>Monitoring Session</th> <th>SOF (Fraction)</th> </tr> </thead> <tbody> <tr> <td>MS#1</td> <td>0.818</td> </tr> <tr> <td>MS#2</td> <td>0.802</td> </tr> <tr> <td>MS#3</td> <td>0.796</td> </tr> </tbody> </table>	Monitoring Session	SOF (Fraction)	MS#1	0.818	MS#2	0.802	MS#3	0.796	+ (Positive)
Monitoring Session	SOF (Fraction)											
MS#1	0.818											
MS#2	0.802											
MS#3	0.796											



# Carbon

— CHECK —

<b>SDG 13: Climate Action</b>	Dtraditional_stove Disposal/Discontinuation of traditional cookstove	Ex-post monitoring survey	Please refer to section A.2 for the detailed assessment for this parameters. <table border="1" data-bbox="1160 400 1823 531"> <thead> <tr> <th>Monitoring Session</th> <th>D<sub>traditional_stove</sub> (Fraction)</th> </tr> </thead> <tbody> <tr> <td>MS#1</td> <td>0.964</td> </tr> <tr> <td>MS#2</td> <td>0.945</td> </tr> <tr> <td>MS#3</td> <td>0.944</td> </tr> </tbody> </table>	Monitoring Session	D <sub>traditional_stove</sub> (Fraction)	MS#1	0.964	MS#2	0.945	MS#3	0.944	+ (Positive)
Monitoring Session	D <sub>traditional_stove</sub> (Fraction)											
MS#1	0.964											
MS#2	0.945											
MS#3	0.944											
<b>SDG 1 1.4.1 Proportion of population living in households with access to basic services</b>	BSA Access to Basic Services (Number of ICS distributed under the project)	ICS sales record (Continuous)	GS VVB has cross checked the data with ICS sales records/04/ and confirms the following.  Stoves considered for ER calculations from all three monitoring session is as below. MS#1: 192,550 MS#2: 149,168 MS#3: 87,280	+ (Positive)								
<b>SDG 1 1.4.1 Proportion of population living in households with access to basic services</b>	HHS (Household Savings)	Ex-post monitoring surveys (Continuous)	The parameter has been monitored by conducting sample surveys/07/. The MS#1 survey were conducted during Oct-Nov 2018, the MS#2 survey were conducted during Oct-Nov 2019 and The MS#3 survey were conducted during Oct-Nov 2020. For VPA 6-11, 100% of the households gave positive response for money saved from reduced consumption of fuel as compared to the baseline situation ever since they acquired and use the project stove. The value is calculated by % HH reporting time / money saving due to reduced fuel consumption in project determined via ex-post questionnaire-based monitoring surveys of a sample of ICS population  GS VVB used acceptance sampling during verification for checking the monitoring results for this parameter and a total of 36 households (18 from MS#1+ MS#2 and 18 from MS#3) were surveyed by the Verification Team. During the survey by GS VVB based on acceptance	+ (Positive)								

			<p>sampling approach the households were interviewed and same questions as asked during monitoring survey were asked from the sample households. All the households responded that they spend less money on wood fuel purchases ever since they acquired and use the project stove.</p> <p>It was observed that the response provided by the households to the Verification team matched with the response provided by households during the monitoring survey as documented in the monitoring survey questionnaires/07/. This was checked with the survey records and found to be correct.</p> <p>Hence this monitoring parameter is deemed to be in compliance with the GS transition annex /B04/ and the registered VPA-DDs /B02/ and MR /02/.</p>	
<p><b>SDG 3</b>  <b>3.9.1 - Mortality rate attributed to household and ambient air pollution</b></p>	<p>SPM<sub>HH</sub>          Reduction in Smoke / PM emissions</p>	<p>Ex-post monitoring surveys</p>	<p>The parameter has been monitored by conducting sample surveys/07/.The MS#1 survey were conducted during Oct-Nov 2018, the MS#2 survey were conducted during Oct-Nov 2019 and The MS#3 survey were conducted during Oct-Nov 2020. For VPA 6-11, 100% of the households gave positive response for reduction in smoke as compared to the baseline situation ever since they acquired and use the project stove. The value is calculated by Ex-post questionnaire-based monitoring survey of a sample of ICS population for qualitative assessment (fraction of sampled users reporting reduction in smoke or PM) as an indicator of reduction in mortality rate attributed to household and ambient air pollution due to inefficient solid biomass fuel-based cooking.</p>	<p>+          (Positive)</p>



			<p>GS VVB used acceptance sampling during verification for checking the monitoring results for this parameter and a total of 36 households (18 from MS#1+ MS#2 and 18 from MS#3) were surveyed by the Verification Team. During the survey by GS VVB based on acceptance sampling approach the households were interviewed and same question as asked during monitoring survey were asked to the sample households. All the households responded that they noticed less smoke coming out ever since they acquired and use the project stove.</p> <p>It was observed that the response provided by the households to the Verification Team matched with the response provided by households during the monitoring survey as documented in the monitoring survey questionnaires /07/. This was checked with the survey records and found to be correct.</p> <p>Hence this monitoring parameter is deemed to be in compliance with the GS transition annex /B04/ and the registered VPA-DDs /B02/ and MR /02/.</p>					
<p><b>SDG 1 and 7 7.1.2 - Proportion of population with primary reliance on clean fuels and technology</b></p>	<p>ACS Affordable and clean energy services</p>	<p>Ex-post monitoring surveys (continuous)</p>	<p>The parameter has been monitored by conducting surveys/07/ of the randomly selected households . The MS#1 survey were conducted during Oct-Nov 2018, the MS#2 survey were conducted during Oct-Nov 2019 and The MS#3 survey were conducted during Oct-Nov 2020. The usage rate achieved for all three monitoring survey is as below.</p> <table border="1" data-bbox="1160 1262 1823 1327"> <thead> <tr> <th>Monitoring Session</th> <th>Values</th> </tr> </thead> <tbody> <tr> <td>MS#1</td> <td>81.8%</td> </tr> </tbody> </table>	Monitoring Session	Values	MS#1	81.8%	<p>+ (Positive)</p>
Monitoring Session	Values							
MS#1	81.8%							

			<table border="1" data-bbox="1160 336 1823 400"> <tr> <td>MS#2</td> <td>80.2%</td> </tr> <tr> <td>MS#3</td> <td>79.6%</td> </tr> </table> <p>GS VVB used acceptance sampling during verification for checking the monitoring results for this parameter and a total of 36 households (18 from MS#1+ MS#2 and 18 from MS#3) were surveyed by the Verification Team. For MS#1 and MS#2 GS VVB based on acceptance sampling approach interviewed households and confirmed whether WBT were conducted.</p> <p>The value is calculated by % HH reporting operational ICS in project determined via ex-post questionnaire-based monitoring surveys of a sample of ICS population</p> <p>Hence this monitoring parameter is deemed to be in compliance with the GS transition annex /B04/ and the registered VPA-DDs /B02/ and MR /02/.</p>	MS#2	80.2%	MS#3	79.6%	
MS#2	80.2%							
MS#3	79.6%							
<p><b>SDG 8</b> <b>8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities</b></p>	<p>QE IG Quantitative employment and income generation</p>	<p>HR records/ Sales and marketing records (Biannually)</p>	<p>The parameter is monitored through the total number of jobs created and their responsibilities / positions (both part time and full time). MS#1 – 25 MS#2 – 10 MS#3 – 05</p> <p>The above was verified by the verification team with the employment records provided by the CME /08/ and further cross-checked through interviews with personnel employed by the CME, CPA implementers, retailers as well as personnel employed for conducting the monitoring survey and WBTs.</p>	<p>+ (Positive)</p>				



			The same was found to be acceptable to Verification Team.	
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Furthermore, during remote interview the CME has confirmed that no disputes, inputs and comments have been received via the Continuous Input and Grievance Mechanism together during the monitoring period.



## APPENDIX A: GOLD STANDARD VERIFICATION PROTOCOL

CC IPL's Checklist question	Ref.	MoV <sup>3</sup>	Findings, comments, references, data sources	Draft conclusion	Final conclusion
<b>1. Sustainability Monitoring</b>					
1.1 Have all non-neutral indicators been monitored as per the sustainability monitoring plan?	/1/	DR,	Yes, all the non-neutral indicators have been monitored as per the sustainability monitoring plan.	OK	OK
1.2 Have the methods to monitor data changed? And are they suitable to the project scale and type?	/1/	DR	Methods to monitor data have not changed as compared with the monitoring plan in the registered passport and monitoring plan.	OK	OK
1.3 Has the way of monitoring been followed? With the inclusion of dates and parameters?	/1/	DR	The sustainability monitoring plan has been followed as per described in the Passport.	OK	OK
1.4 Have mitigation measures been put in place to prevent the risk of the violation of the safe guarding principle of "Do No Harm" assessment or to neutralise a Sustainable Development Indicator that is being monitored?	/1/	DR	The mitigation measures have been put in place that has been put in records as a proof of the same. Several supporting documents as listed under section 2.1 have been provided. Also, the remote interview of the households and interviews of the trained personals of PP were performed during on remote interview.	OK	OK

<sup>3</sup> MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.



CC IPL's Checklist question	Ref.	MoV <sup>3</sup>	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.5 Has all the data in the Sustainability development matrix been verified and cross checked against available sources of project data? Has it been described how sustainable development would be affected if a variance occurred?	/1/	DR and remote interview	Yes, all data in the sustainability development matrix have been verified and cross checked from the supporting documents and during remote audit.	OK	OK
2. Other					
2.1 Are there any issues from the previous validation/verification? (ie FARs, requests / approvals for RMP)	/1/ /B03/	DR	No	OK	OK
2.2 Has the project ever received any requests for reviews or incompletes from the UNFCCC or GS Secretariat?	/1/ /B03/	DR	No there are no request for reviews or incomplete for the project.	OK	OK
2.3 The evaluation of the status of mitigation and compensation measures has been verified.	/1/ /B03/	DR	Yes, the status of mitigation and compensation measures has been verified.	OK	OK



## APPENDIX B

### **CARBON CHECK Certification statement for the Verification Report CC IPL 879/GS/VER/TBSI/20201117**

Carbon Check (India) Private Ltd., the DOE, has performed the verification of six VPAs registered with the GS –PoA “The Breathing Space Improved Cooking Stoves Programme, India” and GS registry number GS916.

VPAs /B02/ under verification are:

1. VPA No. 06 Envirofit (GS3364)
2. VPA No. 07 Envirofit (GS3365)
3. VPA No. 08 Envirofit (GS3366)
4. VPA No. 09 Envirofit (GS3367)
5. VPA No. 10 Envirofit (GS4291)
6. VPA No. 11 Envirofit (GS5046)

The project activity is designed to generate emission reductions by dissemination and use of efficient cook stoves, which minimizes the fuel wood consumption and hence resulting in social benefits such as money savings, time saving and health benefits etc.

The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project. It is DOE’s responsibility to express an independent verification statement on the reported GHG emission reductions from the project. The verification is carried out in-line with the VVS and GS4GG requirements.

Verification was performed to identify the compliance of the project activity with implementation and monitoring requirements and to verify the actual amount of achieved net emission reductions, through obtaining evidence and information and by conducting remote interviews that includes:

- i) To confirm whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and
- ii) To check the evidences supporting the reported data.

The DOE has raised 05 CL and 03 CAR

The DOE with reasonable assurance confirms that reported net GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan (as contained in the registered PoA-DD and eleven VPA-DDs) and are fairly stated.

The DOE, hereby certifies that the project activity, achieved net emission reductions of 323,452 tCO<sub>2</sub> equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

## APPENDIX C: Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FARs from validation and/or previous verification

<b>FAR ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
<i>Not Applicable</i>				
<b>CME response</b>				<b>Date:</b> DD/MM/YYYY
<i>Not Applicable</i>				
<b>Documentation provided by the CME</b>				
<i>Not Applicable</i>				
<b>GS VVB assessment</b>				<b>Date:</b> DD/MM/YYYY
<i>Not Applicable</i>				

Table 2. CLs from this verification

<b>CL ID</b>	01	<b>Section no.</b>		<b>Date:</b> 10/03/2021									
<b>Description of CL</b>													
<p><i>As per the paragraph 335 of the CDM VVS for PoA 2.0 "The DOE shall confirm that monitoring periods have been consecutive. Further, the DOE shall confirm that CPAs have been included in requests for issuance of CERs in a consecutive manner, that is, when a CPA has been included in a request for issuance of CERs for a monitoring period, the DOE shall confirm that a request for issuance of CERs for the previous monitoring period that included the particular CPA has been published."</i></p> <p><i>Verification team has noted that previous verification i.e., Monitoring period 3 covered VPA 1 to 11. However, this verification only includes VPA 6 to 11. Kindly clarify</i></p>													
<b>Project participant response</b>				<b>Date:</b> 12/03/2021									
<p>All ICS installed under VPA 01-05 have completed their design operational life before the start of the concerned monitoring period. Thus, VPA 01-05 have not been included under the concerned monitoring report. Besides, please note the following:</p> <table border="1" data-bbox="363 1258 1225 1357"> <thead> <tr> <th>MP#</th> <th>VPAs covered</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>01-11</td> <td>01/08/2015 to 31/07/2017</td> </tr> <tr> <td>4</td> <td>06-11</td> <td>01/08/2017 to 31/07/2020</td> </tr> </tbody> </table> <p>Thus, for all VPAs covered in MP4, the monitoring period is continuous with previous monitoring period and the VERs for the previous monitoring period have been issued.</p>					MP#	VPAs covered	Duration	3	01-11	01/08/2015 to 31/07/2017	4	06-11	01/08/2017 to 31/07/2020
MP#	VPAs covered	Duration											
3	01-11	01/08/2015 to 31/07/2017											
4	06-11	01/08/2017 to 31/07/2020											
<b>Documentation provided by project participant</b>													
<b>GS VVB assessment</b>				<b>Date:</b> 15/03/2021									
<p>Based on above justification and document review of previous verification, the verification team confirms that the monitoring period is consecutive.</p> <p>CL is closed</p>													

<b>CL ID</b>	02	<b>Section no.</b>		<b>Date:</b> 10/03/2021
<b>Description of CL</b>				

As per the para 11 of Standard: Sampling and surveys for CDM project activities and programmes of activities Version 08.0 “Where there is no specific guidance in the applied methodology, the project participants or the coordinating/managing entity shall use 90/10 confidence/precision as the criteria for the reliability of sampling efforts for small-scale CDM project activities and 95/10 for large-scale CDM project activities. Where two or more project activities, CPAs or PoAs are grouped for undertaking a common survey it shall be ensured that a confidence/precision of 95/10 is achieved for each of the project activity, CPA or PoA that is included in the group for the survey. This reliability specification shall be applied to determine the sampling requirements for each individual parameter value determined through a sampling effort.”

Verification team has observed that CME has applied 95/10 confidence/precision whereas, registered PDD describes that monitoring parameters shall be monitored using a 90/10 (confidence/precision) in case of annual surveys and 95/5 (confidence/precision) in case of biennial surveys in lined with paragraph 22 of the applied methodology AMS-II. G version 03.

CME is requested to clarify

<b>Project participant response</b>	<b>Date:</b> 12/03/2021
-------------------------------------	-------------------------

The single sampling has been conducted at PoA (group of VPAs) level. Thus, the requirements of Para – 22 of Standard for Sampling and Survey for CDM project activities and programme of activities, version 8.0 is deemed applicable which states the following:

*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation.*

Thus, the CME applied 95/10 confidence/precision for annual sampling. Further this is deemed conservative as a higher confidence level has been applied relative to that mentioned in the PoA/VPA-DDs.

<b>Documentation provided by project participant</b>
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<b>GS VVB assessment</b>	<b>Date:</b> 15/03/2021
--------------------------	-------------------------

Based on the review of above response the validation team confirms that requirement of para 22 is applicable because sampling has been conducted at PoA level and CME has applied 95/10 confidence/precision for annual sampling which is in lined with the para 22 of Standard for Sampling and Survey for CDM project activities and program of activities, version 8.0.

<b>CL ID</b>	03	<b>Section no.</b>		<b>Date:</b> 10/03/2021
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<b>Description of CL</b>
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As per the paragraph 300 of the CDM VVS for PoA 2.0 “The DOE shall assess whether the data collection system meets the requirements of the registered monitoring plan as per the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents”

Based on the above requirement verification team has noted that for MS#3 CME has not conducted physical survey of the usage summery and WBT were also not conducted. CME is requested to clarify how does it comply with VPA DD Monitoring plan.

<b>Project participant response</b>	<b>Date:</b> 12/03/2021
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Due to COVID risks it was not possible to conduct the monitoring (usage surveys or WBTs) physically during MS3. Thus, taking note of the Gs4GG COVID-19 INTERIM MEASURES and its validity till June 30, 2021, the CME adopted the following alternative approach for MS3 monitoring:

1. The usage surveys were conducted remotely over phone.
2. The usage surveys were done with Primary Cook only.
3. Oversampling was conducted to monitor 10% higher number of samples that required.
4. The results of the usage survey were compared with previous monitoring results and conservative value was applied. The current monitoring period is categorized into three annual events (MS1, MS2 and MS3). Please see below for details

Monitoring Session #	Monitoring session duration	Mode of usage survey	Mode of WBT	Comments
1	01 Aug 2017 – 31 Jul 2018	physical	physical	--
2	01 Aug 2018 – 31 Jul 2019	physical	physical	--
3	01 Aug 2019 – 31 Jul 2020	Remote (phone calls)	--	Usage rate for MS3 is lower than that achieved in MS2.

5. For WBTs, a linear degradation approach based on past trend (as established using MS1 and MS2) was applied to MS3 to calculate corresponding WBT values.

The aforesaid approach is deemed robust enough to ensure the VERs reported are credible, accurate and conservative. Besides, this is based on the approved deviation on the concerned PoA, albeit for VPA 12 and 13.

#### Documentation provided by project participant

#### GS VVB assessment

*Based on the review of deviation request submitted by CME, ER sheet and survey records the verification team confirms that CME has met the deviation criteria by conducting survey remotely and with prime cook only. Furthermore, CME has conducted oversampling which is 10% higher than required.*

*Moreover, CME has applied linear degradation a approach based on past trend for the WBT calculation.*

*CL is closed*

<b>CL ID</b>	04	<b>Section no.</b>		<b>Date:</b> 10/03/2021
<b>Description of CL</b>				
<i>CME is requested to clarify the statement written under "Section F. Safeguards Reporting" Refer GS4GG Transition Annex version 3.0 dated 06/11/2019.</i>				
<b>Project participant response</b>				<b>Date:</b> 12/03/2021
A detailed safeguarding Principles assessment has been documented in the GS4GG Transition Annex version 3.0. Safeguards reporting is not deemed applicable as there are no safeguarding principles that require any mitigative action.				
<b>Documentation provided by project participant</b>				
<i>GS 916 MP#4 Monitoring Report version 2.0 12032021</i>				
<b>GS VVB assessment</b>				
Based on the review of revised monitoring report, the verification team confirms that CME has elaborated section F.				
CL is closed				

<b>CL ID</b>	05	<b>Section no.</b>		<b>Date:</b> 10/03/2021
<b>Description of CL</b>				
Version of PoA-DD applicable to this monitoring report in Page 2 of the MR refers old Version of the PoA DD. CME is requested to clarify				
<b>Project participant response</b>				<b>Date:</b> 12/03/2021
The PoA has been renewed for its second period. However the VPAs being verified were included in the PoA before the second period and hence follow the registered PoA-DD version 5.2 dated 21/11/2012 pertaining to the first PoA period.				
<b>Documentation provided by project participant</b>				
<b>GS VVB assessment</b>				<b>Date:</b> 15/03/2021
Based on the review of above response and VPA DDs being verified under current monitoring period the verification team confirms that registered PoA-DD version 5.2 dated 21/11/2012 pertaining to the first PoA period is correct.				
CL is closed				

**Table 3. CARs from this verification**

<b>CAR ID</b>	01	<b>Section no.</b>		<b>Date:</b> 10/03/2021
<b>Description of CAR</b>				
Verification team has noted following discrepancies in the MR.				
<ul style="list-style-type: none"> <li>• <math>\eta_{new}</math> – Measuring/reading/recording frequency is mentioned as biennial which is not consistent with the registered monitoring plan</li> <li>• SOF- Measuring/reading/recording frequency is mentioned as biennial which is not consistent with the registered monitoring plan</li> <li>• Dtraditional_stove- Measuring/reading/recording frequency is mentioned as biennial which is not consistent with the registered monitoring plan</li> <li>• Section D.3 of the MR for the parameter Dtraditional_stove, Value obtained last monitoring period is found to be inconsistent</li> <li>• Section D.4 of the MR indicates Sampling at VPA level which is inconsistent</li> <li>• Key project information (page no 3) does not refers to the latest version of VPA DD for VPA 10</li> </ul> <p>CME is requested to provide revised MR addressing the aforesaid.</p>				
<b>Project participant response</b>				<b>Date:</b> 12/03/2021
<ul style="list-style-type: none"> <li>• <math>\eta_{new}</math> – The registered monitoring plan gives an option to monitor the parameter annually or biennially. Since in the monitoring period annual monitoring frequency has been followed hence the MR has been revised to specify the frequency as annual.</li> <li>• SOF - same as above</li> <li>• Dtraditional_stove - same as above</li> <li>• Section D.3 of the MR has been revised to remove the inconsistency. In the last MP the date was reported as % use of traditional stoves. In the current monitoring period, the value has been correctly represented as % discontinuation of traditional stoves (= 1 - % use of traditional stoves)</li> <li>• The sampling applied in the concerned monitoring period is PoA level (or a group of VPAs) and is not at VPA level (individually for each VPA). This has been corrected in section D.4 of the revised MR.</li> <li>• The version of VPA DD for VPA 10 has been revised in the key information note.</li> </ul>				
<b>Documentation provided by project participant</b>				
GS 916 MP#4 Monitoring Report version 2.0 12032021				
<b>GS VVB assessment</b>				<b>Date:</b> 15/03/2021
Based on the review of revised monitoring report the verification team confirms that all of the above discrepancies has been removed.				

<b>CAR ID</b>	02	<b>Section no.</b>		<b>Date:</b> 10/03/2021
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<b>Description of CAR</b>	
<i>Verification team has noted that achieved ER for the CPA 09 is greater than the estimated value. However, CME has not provided any remarks on this in section E. 6 “E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD” of the MR.</i>	
<b>Project participant response</b>	<b>Date:</b> 12/03/2021
<p>Firstly, the ERs of VPA 09 is merely 0.7% higher than that estimated in the VPA-DD. This immaterial increase is attributed to actual monitoring parameter values which are likely to differ from that estimated ex-ante for and specified in the VPA-DD for VPA 09.</p> <p>It is worth noting that overall ERs from the concerned monitoring period is merely ~83% of the estimated ex-ante ER volumes estimated in the VPA-DDs.</p>	
<b>Documentation provided by project participant</b>	
<b>GS VVB assessment</b>	<b>Date:</b> 15/03/2021
Based on the review of above response the verification team confirms that achieved ERs of CPA 09 is 0.7% higher than the estimated ERs. However, total ER from the concerned monitoring period is still less than the estimated ERs.	

<b>CAR ID</b>	03	<b>Section no.</b>		<b>Date:</b> 10/03/2021
<b>Description of CAR</b>				
<i>Verification team has noted that CME has not provided the latest employment record, CME is requested to provided the same.</i>				
<b>Project participant response</b>				<b>Date:</b> 12/03/2021
The latest employment record is being submitted				
<b>Documentation provided by project participant</b>				
HR Employment Record 2017-2020				
<b>GS VVB assessment</b>				<b>Date:</b> 15/03/2021
The verification team confirms that latest employment record is being submitted				

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## APPENDIX D

### Certificates of Competence

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## Carbon Check (India) Private Ltd.

### Sanjay Agarwalla

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

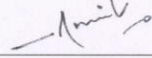
For following functions:

Validator  Team Leader  Technical reviewer   
 Verifier  Technical Expert  Local Assessor<sup>1</sup>

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. Vikash Kumar Singh  
 Compliance Officer

  
 Mr. Amit Anand  
 CEO

**Date of Approval**  
 24/12/2020

**Valid Till**  
 24/12/2021

#### Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

<sup>1</sup> India

CARBON CHECK (INDIA) PRIVATE LIMITED  
 CIN: U74930DL2012PTC232495

Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh  
 Tel: +91 120 4373114 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in) | e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)



## Carbon Check (India) Private Ltd.

### Vikash Kumar Singh

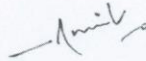
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator  Team Leader  Technical reviewer   
 Verifier  Technical Expert  Local Assessor<sup>1</sup>

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**  
24/12/2020

**Valid Till**  
24/12/2021

#### Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

<sup>1</sup> India, South Africa

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