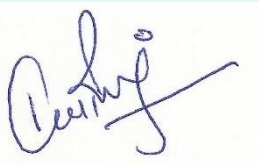


Validation report form for validation of voluntary project activities Gold Standard for Global Goals		
BASIC INFORMATION		
Title and GS reference number of the programme of activities (PoA)	GS10789: ECOA_BURN MULTI-COUNTRY CLEAN COOKING PROGRAMME	
Version number of the validation report	3.1	
Completion date of the validation report	17/06/2023	
Title and reference number of each VPA to be included	VPA Ref. no.	Title
	GS 11433	GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)
	GS 11435	GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)
Version numbers of the VPA-DDs to which this report applies	VPA 05: Version 2.6 VPA 07: Version 2.6	
Applied methodologies and standardized baselines for each CPA	VPA no.	Applied methodologies
	VPA 05 & VPA 07	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 03.1
Coordinating/managing entity (CME)	BURN Manufacturing Co.	
Host Parties	VPA 05: Democratic Republic of Congo VPA 07: Democratic Republic of Congo	

Estimated SDG Impacts	SDG13: Climate Action SDG 1: No Poverty SDG 3: Good Health and well being SDG 7: Affordable and Clean Energy SDG 8: Decent Work and Economic Growth
Name of the VVB	Earthood Services Private Limited
Name, position and signature of the approver of the validation report	 Dr. Kaviraj Singh Managing Director

SECTION A. Executive summary

The purpose of the VPAs is to provide efficient cookstove with the help of local partners and the VPAs Implementer BURN Manufacturing Co. which is also the Coordinating and Managing Entity (CME). Under the VPAs GS11433 (VPA 05), & GS 11435 (VPA 07) the CME will distribute/sell ICS in Democratic Republic of Congo (VPA 05 & 07). These VPAs focus on reduction of greenhouse gas emissions from the burning of non-renewable woody biomass and/or charcoal for cooking purpose. Improved Cookstoves (ICS) improves heat transfer efficiency as compared to the baseline conventional stoves and also reduce the dependency using non-renewable woody biomass, thereby reducing the GHG emissions from the burning of non-renewable woody biomass and/or charcoal for cooking, fulfilling the requirements of the applied methodology TPDDTEC Version 3.1/5/.

The VPAs are being submitted to GS4GG for validation and the Coordinating/managing entity of the PoA is BURN Manufacturing Co.

Parameter	Validated information
GS ID of the VPAs to be included	GS11433 (VPA 05), & GS 11435 (VPA 07)
Title of the VPAs	GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)
Methodology applied	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 03.1
Crediting period	5 years, Renewable

These VPAs aim at the availability of efficient cooking system to the people of Democratic Republic of Congo by distributing ICS, implemented by BURN Manufacturing Co. The households in these countries traditionally use non-renewable biomass (Charcoal) for cooking. Thus, baseline for this Project is the amount of non-renewable biomass (Charcoal) consumption in the absence of project activity for cooking purposes.

Start date of the PoA is 01/07/2019 and 23/12/2020 for VPA05 and 11/07/2022 for VPA07. The certification cycle of the VPAs is considered as 15 years, which is in line with the crediting period under Community Services Activity Requirements version 1.2. The start date, length and type of the crediting period is also consistent with the PoA description in PoA-DD/4/.

The VPAs i.e., GS11433 (VPA 05) & GS 11435 (VPA 07) envisage an estimated annual GHG emission reduction and other SDG impacts over the crediting period as given in the table below.

SDG Impacts	VPA05	VPA07
SDG13: Climate Action	98,387tCO ₂ (eq)	541,507 tCO ₂ (eq)
SDG 1: End poverty in all its forms everywhere	45.20 %	45.20 %

SDG 3: Ensure healthy lives and promote well-being for all at all ages	98.94%	98.94%
SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all	14,390	79,200
SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all	25	25

Scope of Validation

The scope of the services provided by Earthood Services Private Limited is to perform validation of the VPAs GS11433 (VPA 05) & GS11435 (VPA 07) under the PoA. The scope of validation is to assess the claims and assumptions made in the VPA-DDs against the GS4GG criteria and UNFCCC's CDM, including but not limited to GS4GG Programme of Activities Requirements version 2/2/, Community Services Activity Requirements version 1.2/3/, applied methodology TPDDTEC version 3.1 /5/, GS4GG Principle & Requirements version 1.2/1/, GHG Product Requirements/8/, GHG emissions reductions sequestration and product requirements version 2/27/ and CDM PS for PoA version 3.0/14/, CDM VVS for PoA /7/version 3.0.

Validation Process

The validation process is undertaken by the validation team that involves the following:

1. The desk review of documents and evidence submitted by the project participant in the context of GS4GG criteria along with the reference CDM rules and guidelines issued by CDM EB,
2. A remote audit to assess the baseline practices followed by interviews with CME and the VPA Implementers,
3. Reporting audit findings concerning clarifications and non-conformities and the closure of the findings, as appropriate,
4. Preparing a draft validation report for the inclusion of VPA complying with the Gold Standard requirements.

An independent Technical Review team reviews the validation report prepared by the validation team. The final validation report that is accepted by Technical Reviewer is then approved on behalf of Earthood Services Private Limited and processed further as per GS4GG procedures.

Conclusion

The review of the VPA DDs, supporting documentation and subsequent follow-up actions have provided Earthood with sufficient evidence to determine the fulfilment of stated criteria. Earthood is of the opinion that the VPAs titled "GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)" and GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) as described

in the VPA DDs/9/ meet all relevant requirements of GS4GG, meets host country criteria and has correctly applied the methodology GS TPDDTEC v3.1/5/ for application to efficient cooking system distributed/sold through BURN Manufacturing Co. group and partner organisation. Therefore, the VPAs are being recommended to GS4GG for inclusion.

SECTION B. Validation team, technical reviewer and approver

B.1 Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection*	Interviews	Validation findings
1.	Team Leader & Meth Expert (new)	IR	Jain	Arohi	Central Office	Y	N	Y	Y
2.	T.A. Expert & GS approved auditor	IR	Guleria	Shifali	Central Office	Y	N	Y	Y
3.	Team Leader and Meth. Expert (old)	IR	Singh	N. Premjit	Central office	Y	N	Y	Y
4.	Team Leader and Meth. Expert (old)	IR	Guleria	Shifali	Central office	Y	N	Y	Y
5.	Technical, Meth Expert (TA3.1) (old)	IR	Singh	N. Premjit	Central office	Y	N	Y	Y
6.	Local Expert	ER	Emmanuel	Kasiho Mushagalusa	DRC	N	Y	Y	N

*Remote Audit was conducted due to outbreak of conflict in DRC as described in detail under section C.2 of this report.

B.2 Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g.name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Garg	Shreya	Central office
2.	Expert to TR	IR	Garg	Shreya	Central office
3.	Approver	IR	Singh	Kaviraj	Central office

SECTION C. Means of validation

C.1 Desk/document review

The validation of the Voluntary Project Activities (VPAs) is performed primarily as a document review of the VPA design documents for VPAs GS11433 (VPA 05) and GS11435 (VPA7) /9/, SDG Outcome Calculation sheets/28/, fNRB calculation sheets/6/, the baseline survey forms (Analysis sheet) /30/ and independent research on several platforms. The cross checks between information provided in the VPA-DDs/9/ and information from sources other than those used, if available, the validation team's sectoral or local expertise and, if necessary, independent background investigations. The complete list of documents/evidence assessed by validation team is included under Appendix 3.

C.2 On-site inspection

Duration of site inspection				
No.	Activity performed during site inspection	Site location	Date	Team member

1.	The on-site visit was not possible due to the outbreak of conflict zones/areas that pose a high risk to life. Following Activities are performed during remote audit. -Opening Meeting: Introduction, scope and objective of work, roles and responsibilities of audit team. -Parameter fixed Ex-ante and Baseline emissions, Project emissions and Leakage calculation -Project boundary and emission sources included in the project boundary. -Choice and applicability of baseline methodology(ies) -Project Activity (Technology, Location and Implementation) -Monitoring plan (feasibility of monitoring arrangements described in PDD, QA/QC procedures, responsibility of implementation of monitoring plan, data recording & storage procedures) -Operational lifetime of the project activity, Start date of the project activity, Crediting period -Environmental impacts and need of EIA -Local Stakeholder Consultation process, comments received.	Democratic Republic of Congo	26/07/2022	N Premjit Singh, Arohi Jain, Surya Krishna Tangeti, & Kasiho Mushagalusa Emmanuel (LE)
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During the current validation, the on-site visit was not possible due to the outbreak of conflict in the zones/areas posing high risk to life. CME has submitted a gold standard approved Deviation Request Form with reference number DEV_284 for conducting Remote site visit/44/ as the project area falls in the conflict zone of DRC i.e. these areas are currently witnessing several incidents of violence. The travel to these areas is restricted and very dangerous. Below are some of the publicly available news/information/live videos regarding these regions.

Media Source:

<https://www.aljazeera.com/news/2022/7/26/protesters-demand-un-troops-leave-drc-amid-rising-conflict>

The incidents of violence have broken out during mid July 2022 and making it unsafe for the VVB validation team to travel to DRC. Since the VVB has already been contracted, BURN is unable to provide statement of unwillingness to travel to DRC from another VVB, which is the conflict zone requirements. It is not clear when the situation will stabilize, and BURN is

at risk of the project's timelines getting delayed and the review date for the VPAs being pushed further behind. It is advised to restrict the avoidable travel due to which the validation team didn't take risk and plan a physical onsite assessment.

It is important to note that the GS4GG has provided alternative measures relating to mandatory on-site visits for VVBs audits.

Alternative Measures relating to mandatory on-site visits for VVBs audits include:

a. A VVB may postpone site visits for on-site inspections, taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB (if any) and other relevant travel restrictions and guidance (for example, a requirement to self-isolation upon return from specific countries).

b. 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.

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. Therefore, in this validation due to the commitment of the project developer as per the delivery timeline, the site-visit could not be postponed, and the on-site visit was replaced by remote audit.

The remote audit included the interviews with the CME representatives and the CPA implementers through video call via Teams meeting app. The VVB also interviewed the end-users on sampling basis as discussed under section C.3. of this report.

C.3 Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Subramanian	Sriskandh	Carbon Consultant	26/07/2022	•Discussion on Programme Design and eligibility criteria •Proposed Technology to be used in the VPAs of the PoA	N Premjit Singh, Arohi Jain, Surya Krishna Tangeti & Kasiho Mushagalusa Emmanuel (LE)

					•CME Management System Manual • Discussion on	
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					programme funding and involvement of any ODA •Discussion on the PoA DD/VPA DD and ER sheet •Monitoring/Sampling plan •Discussion on the GS preliminary review comments •Sustainability aspects of the PoA SDG impacts	
2.	Otolo	Natasha	Carbon Manager	26/07/2022	•Monitoring plan •Baseline scenario •Technical description •Additionality •Project boundary, Ex-ante and Ex-post parameters	
3.	Njihia	Samuel	Head of market Intelligence	26/07/2022	•Program design •Baseline scenario •ex-ante and monitored parameters	
4.	Xerinda	Norato	Senior Carbon Officer	26/07/2022	•Monitoring plan •Baseline scenario •Technical description •Additionality •Project boundary •Ex-ante and Ex-post parameters	
5.	Varghese	Tom	Senior Carbon Officer	26/07/2022		

6.	Momanyi	Henry	B.I Data analyst	26/07/2022	•Data handling procedure •Ex-ante and Ex-post parameters	
End-users:						
1.	Nyassa	Vumilia	Baseline user	26/07/2022	•Baseline fuel type •Baseline cookstove type •Year of Baseline KPT •Any seasonal variation	N Premjit Singh, Surya Krishna Tangeti & Arohi Jain
2.	Bikubanga	Sarah	Baseline user	26/07/2022		
3.	Bulenda	Esperance	Baseline user	26/07/2022		
4.	Neema	Gloria	Baseline user	26/07/2022		
5.	Nyota	Jocelyne	Baseline user	26/07/2022		
6.	Rosette	Bahati Tumba	Baseline user	26/07/2022		
7.	Prosper	Kandolo Lusumba	Baseline user	26/07/2022		
8.	Rutambuka	Esperance	Baseline user	26/07/2022		
9.	Malinga	Rosine	Baseline user	26/07/2022		
10.	Lwaboshi	Marina	Baseline user	26/07/2022		
11.	Ntabala	Esther	Baseline user	26/07/2022		
Local Stakeholders:						
1.	Jordan	Mukumiro	Stakeholder	26/07/2022	•Implementation of Project •Grievance Mechanism •Opinion on Project	N Premjit Singh, Surya Krishna Tangeti & Arohi Jain
2.	Bikubanga	Joseph	Stakeholder	26/07/2022		
3.	Dunia	Mbalecha bo	Stakeholder	26/07/2022		

Type of questions asked by the Team member

No.	Questions asked by Team Leader to baseline users
1.	Number of people in the household
2.	Baseline cookstove device
3.	Fuel type used in the baseline stove and how long does it take to collect fuel
4.	Year of Baseline KPT conducted at their household
5.	Users were also asked about their opinion; for example: smoke level or indoor air pollution, Price of fuel, cooking pattern (fuel usage) & effect of season on fuel source and type. This covers the VVB's assessment on safeguarding principles, SDG assessment and stakeholder inclusivity.

C.4 Sampling approach

CME Approach:

CME will follow sampling procedures given in Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 3.1/5/ for determining the sample size of each parameter. A confidence precision of 90/10 will be ensured by CME for meeting the annual/biennial monitoring criteria. The sampling approach undertaken by CME is duly explained under section B.7.2 of the VPA-DDs/9/, which has been assessed by the validation team and found to be correct and in-line to the TPDDTEC v3.1/5/.

Furthermore, Due to the outbreak of conflict in the zones/areas posing high risk to life. CME has opted for cross VPA sampling during the baseline survey for a large scale VPA implemented under registered GS PoA 10789 ECOA_BURN Multi-country Clean Cooking Programme (GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) and GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)).

As the project area falls in the conflict zone of DRC i.e. these areas are currently witnessing several incidents of violence. The travel to these areas is restricted and very dangerous. The publicly available news/information/live videos regarding these regions are summarized under section C.2.

Considering all the VPAs are homogenous, implemented in the same project boundary and targeted beneficiaries with similar socio-economic strata. CME has applied single sampling plan for a group of VPAs (VPA 05 & 07) which are large scale VPAs. Furthermore, the cross VPA sampling has been done in line with CDM Sampling Standard para 11, page 5 which states 95/10 confidence/precision is met for the VPAs/13/.

VVB's Sampling approach:

The sampling and surveys for CDM project activities and programmes of activities (Version 9.0) /13/16/ states under paragraph 28 that "When the project participants or the coordinating/managing entity have applied a sampling approach, the DOE may apply acceptance sampling as described in the steps indicated below as part of validation/verification activities". The validation team has conducted acceptance sampling for the baseline consumption of the fuel with the help of baseline survey in line with paragraph 30 and 31 of the sampling standard version 9.0/13/.

As per para 39 of the sampling standard version 9.0/13/, "A DOE may select a different sample size than the one indicated in paragraph 32 above either by choosing a different value for the consumer risk and producer risk (e.g. 20 per cent for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:

- (a) The estimated volume of annual GHG emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 t CO₂eq.;
- (b) The security conditions in the project region prevents inspection of many samples (eg. conflict zones); or
- (c) The project activity or the PoA is located in a least developed country or a host party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified."

The PoA is located in Democratic Republic of Congo (DRC), which are LDCs. Thus, the validation team can choose a different sample size than one indicated in para 32 of the sampling standard/13/.

The validation team selected random sample of CME's sampled records to check the acceptability (or otherwise) of the data for each such record with CME's sample records and determined if the CME's sample records meet the requirements.

The validation team selected the sample size as 11 households with 3 households extra as backup for the purpose of remote site inspection to check the acceptability of CME's sampling results or otherwise.

Sample Size: (Per region)

PoA Ref no.	AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
GS 10789	0.5%	20%	10%	20%	11	0

The Validation team covered a total of 11 samples and observed a few typographical errors related to erroneous reporting of data from the baseline survey forms into the baseline survey calculation sheet. It has now been ensured that all the data is now consistent between the baseline survey forms and SDG calculation sheet. There were no material errors identified that might have resulted in the overestimation of the SDG impacts.

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

Areas of validation of compliance	No. of CL	No. of CAR	No. of FAR
Proposed VPAs and corresponding generic VPAs	-	-	-
FARs raised during previous rounds	-	-	VPA 05 (FAR#01, FAR#02, FAR#03), VPA 07 (FAR#01, FAR#02, FAR#03)
Compliance with VPA-DD form	-	-	-
General description of the VPAs	VPA05(CL#02) VPA07(CL#02)	VPA05(CAR#06, CAR#08, CAR#09) VPA07(CAR#06, CAR#07, CAR#08)	-
Assessment of the eligibility of the VPAs under Gold Standard	VPA05(CL#01) VPA07(CL#01)	-	-
Application of methodologies and standardized baselines	-	-	-
Reference of methodologies and standardized baselines	-	-	-
Project boundary, sources and GHGs	-	VPA05(CAR#01) VPA07(CAR#01)	-
Baseline scenario	VPA05(CL#08) VPA07(CL#08)	VPA07(CAR#09)	-
Ongoing financial need	-	-	-
Prior consideration	-	-	-

Demonstration of additionality	-	VPA07(CAR#10)	-
SDG outcome assessment	VPA05(CL#03) VPA07(CL#03)	-	-
Data and parameters	-	VPA05(CAR#05) VPA07(CAR#05)	-
Estimation of SDG impacts or net anthropogenic removals	-	VPA05(CAR#02) VPA07(CAR#02, CAR#11)	-
Equations and parameters applied to calculate SDG impacts	VPA05(CL#0 7CL#09) VPA07(CL#07)	VPA05(CAR#03 CAR#07) VPA07(CAR#03)	-
Ex ante calculation of SDG impacts or net anthropogenic GHG removals	VPA05 (CL#04 CL#05) VPA07 (CL#04 CL#05)	VPA05(CAR#04) VPA07(CAR#04)	-
Start date, crediting period type and duration	VPA05(CL#06) VPA07(CL#06 ,CL#09)	-	-
Environmental impacts	-	-	-
Local stakeholder consultation (Interviews)	VPA07(CL#10)	-	-
Sustainability Assessment	-	-	-
Safeguarding principles assessment	-	-	-
Gender Sensitive requirements	-	-	-
FAR from this validation	-	-	VPA 05 (FAR #01), VPA 7 (FAR#01)
Total	19	20	08

C.6 Proposed CPAs and corresponding generic VPAs

VPA title and reference number	Version number of the VPA-DD	Host Party	Version number of the PoA-DD into which the VPA is included
GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) – GS 11433	2.6	Democratic Republic of Congo (DRC)	Version 4.1
GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)- GS 11435	2.6	Democratic Republic of Congo (DRC)	Version 4.1

C.7 Compliance with VPA-DD form

Means of validation	The VPA-DDs/9/ have been prepared using the applicable version of GS4GG VPA-DD, i.e., version 2.0/10/. It has been checked from the GS website that the form used is appropriate and applicable for the VPAs. Each section of the VPA-DDs/9/ were also checked with the guidelines stated in the form/10/ and found to be fulfilling it.
Findings	No Findings
Conclusion	The VPA-DDs /9/ are found to be complying with the applicable form and all the sections filled are in line with the form guidelines.

C.8 Assessment of the eligibility of the VPA(s) under PoA

Means of validation	Applicability Criteria as per Gold Standard	Required Condition	CME's Justification	Means of Validation
	a. Geographical boundary	ICS distributed under any of the VPAs will be located in any of the countries mentioned under Table 1 of the PoA-DD.	ICS are distributed to urban and peri urban households across 16 provinces of DRC. For more details see section A.2. of VPA-DD documents.	The aim of the VPAs is to provide efficient cooking system to the communities and institutions in Democratic Republic of Congo (DRC) declared by CME under Section A.2 of the VPA-DD/9/ and confirmed from the geo coordinates of the baseline users/29/ as cross-checked against https://www.latlong.net/ and this is in line with para 3.1.1 (d) of Community Service Activity Requirements (Version 1.2)/3/. Thus, the VPAs are eligible to be included under GS4GG. This is also in

				accordance with GS4GG Principles and Requirements paragraph 3.1.1 (a)/1/.
	b. Double-counting of project activities	All VPAs will be checked to prevent double counting and are not registered as a separate GS project activity, nor included as part of another registered GS (or other carbon standard) PoA nor that the project activity has been deregistered.	All carbon standard registries (UNFCCC, GS and VERRA) have been checked and it is confirmed that the VPA has not been registered as a separate GS project activity, nor included as part of another registered GS (or other carbon standard) PoA nor that the project activity has been deregistered. The	A declaration/24/ has been provided by the CME confirming about the provision to eliminate double counting. At the time of implementation, each product will be assigned a unique serial ID to enable the identification of the product belonging to the VPAs.

			same has been confirmed by a letter signed by the VPA implementer which shall be submitted to GS	
	c. Technology	Each VPA will implement improved biomass cook stoves.	The VPA implements highly efficient cookstoves known as 'Jikokoa'. Detailed manufacturer's technology specifications are listed in section A.3 of VPA-DD document.	The manufacturer's specifications /33/ were checked for the technology related details to be distributed/sold under the VPAs.
	d. Conditions to check the start date of the VPA through documentary evidence	The start date of a project activity is the date on which the first ICS has been distributed under the VPA. The start date of retroactive VPAs (with a start date prior to date of first submission of PoA) can be at the earliest 1 year prior to submission of documents for GS preliminary review	The start date for VPA 05 is 23/12/2020 & VPA 07 will be 11/07/2022., i.e. the day when the first ICS was distributed to a household under this VPAs. The start date of the VPA can be confirmed by an electronic registration done on koboCollect which shall be submitted to VVB. The project start date is before the 1st Round of Local Stakeholder	The first date of the distribution of ICS for VPA 05 is 23/12/2020 & VPA 07 will be 11/07/2022. The CME has submitted the registration of ICS kobocollect/15/.

			Consultation, hence, the VPA is retroactive..	
	e. Methodology	Each VPA will comply with the applicability criteria of the applied methodology (TPDDTEC, version 03.1)	The VPA complies with all applicability criteria of TPDDTEC as further outlined in section B.2 of VPA-DD document.	It has been assessed in the further sections of this report that the ICS technology to be distributed will comply with TPDDTEC, version 03.1/5/. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1/1/.
	f. Financial Additionality & Ongoing Financial Needs	Projects (VPAs) to be included under the PoA will be in compliance with item 1.1.3 of Annex B – positive list mentioned in the 'Community Services Activity Requirements' or located in LDC, SIDS, LLDC. A VPA will be solely composed of isolated units (efficient cookstoves) where the users of the technology/measure are household/SMEs /institutions and where each unit results in $\leq$ 1,800 MWh of thermal energy savings per year. Hence,	The thermal energy savings per year at a unit level (i.e. per ICS) are clearly below 1,800 MWh as outlined in the ER calculation excel spreadsheet that shall be submitted to VVB during Validation.	The VPAs are considered to be automatically additional according to para 4.1.9 (a) and (b) of 'Community Services Activity Requirements'/3/. However, the VPAs are also in accordance with item 1.1.3 of Annex B – positive list mentioned in the 'Community Services Activity Requirements', Version 1.2./3/ wherein all the VPAs will only be composed of micro-scale units. This demonstration has been confirmed from the ER sheets/28/. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1/1/.

		according to paragraph 4.1.9 of the 'Community Services Activity Requirements', a VPA, regardless of the host country in which the project activity is being implemented, is deemed additional and therefore is not required to prove financial additionality at the time of Design Certification; OR a VPA is located in a LDC, SIDS, LLDC.		
	g. Stakeholder inclusivity	Local stakeholder consultation is done at VPA level, as described in section F of the PoA-DD. Local stakeholder consultation report must be provided along with VPA-DD. A single Stakeholder consultation can be conducted for a group of VPAs as long as convincing justification is	A local stakeholder consultation for this VPA has been conducted and the LSC report has been submitted to GS. The physical LSC meeting and stakeholder feedback round have been conducted (see LSC report for more details). The Local Stakeholder Consultation would be also valid for any	The CME has conducted the LSC on 13/08/2020 and 14/08/2020 as checked from LSC attendance sheet and LSC photos /26/. The LSC has been conducted at VPA level as per section F of the PoA-DD /04/. Sample stakeholders who attended the meeting were also interviewed during the remote audit and their feedback on the project was positive.

		provided.	other Voluntary Project Activities (VPAs) implemented in DRC under BURN's Gold Standard PoA 'ECO_A_BURN multi-country Clean Cooking programme', provided that they are homogeneous, i.e. deploy the same stove type(s), target the same end-users and consist of the same project boundary as this specific VPA.	
	h. Conditions related to environmental Impact Analysis	The VPA has to fulfil host country requirements (if any) concerning environmental impact analysis.	No EIA is required by the host country for ICS project activities.	The ICS project activities does not require any EIA as per the Host country requirement.
	i. CME Approval	Each VPA has a project implementer that is either the Coordinating/Managing Entity or another entity that has signed a contractual agreement with the CME. Those agreements include all rights and responsibilities of both parties,	This eligibility criterion is not relevant for this VPA since the CME is the same entity as the VPA implementer	Approval from CME is not relevant for this VPA since the CME is the same entity as the VPA implementer

		e.g. approval procedures by the CME, monitoring requirements, carbon credit rights transfer. This eligibility criterion is not relevant if the CME is the VPA implementer.		
	j. Transfer of carbon credit ownership	The transfer of carbon credit ownership all along the investment chain is clearly described and communicated to all project participants and end-users so that they are aware of to give up their rights on emission reductions. For technology producers and the retailers of the improved technology, this must be communicated by contract or clear written assertions in the transaction paperwork. The end-users will need to be informed and notified that they cannot claim for	The end-users permanently waive any claim or rights on carbon credits to the VPA implementer (also the CME of the PoA). This is confirmed by strap on ICS box and warranty booklet. Supporting documentation related to strap and warranty booklet shall be submitted to VVB. There is a contractual agreement between distributors/retailers in which distributors/retailers waive any claim or rights on carbon credits to the VPA implementer (also CME of the PoA). A sample	CME has submitted the supporting document related to carbon credit ownership/18/. The end-users permanently waive any claim or rights on carbon credits to the VPA implementer. This is confirmed by strap on ICS box and Carbon waiver sticker.

		emission reductions from the project	agreement shall be submitted to VVB.	
	k. Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of ODA	In case that any of the VPA receives ODA, it is ensured that there is no diversion of ODA, i.e. that no ODA is provided under the condition that all or part of the carbon credits have to be returned to the donor country/entity providing ODA.	The VPA implementer has signed an ODA declaration confirming that there is no diversion of ODA. The same has been submitted to GS	The CME has provided with an ODA declaration/24/ that shows that no funds for any official development assistance will be utilized for the Project. This is in line with the PoA DD/4/.
	l. Target Group and distribution mechanism	The VPA serves households, institutions, or SMEs either in urban, peri-urban and/or rural areas, and distributes the cook stoves through adequate distribution channels.	This VPA targets households in urban and peri urban areas across 16 provinces of DRC. ICS are distributed through direct sale/distribution and/or a variety of retail outlets across the 16 provinces to end-users.	Distribution database/25/ contains details of end users of household of 16 provinces of DRC, confirms that only households have been part of the project population. This is in accordance with the PoA DD eligibility condition/4/

	m. Conditions related to sampling requirements for the PoA	The VPA complies with the sampling plan as outlined in the PoA-DD, section B.3 and VPA-DD, section B.7.2	The VPA-DD outlines the sampling plan in section B.7.2 which is in line with the one stipulated in the PoA-DD. The VPA will make part of a single sampling covering a group of VPAs, as soon as there are other homogenous VPAs. In case of a grouped sampling approach, the CDM Project Standard for PoAs will be followed.	Sampling approaches are set out in each VPA and will follow the TPDDTEC v3.1 methodology. Since VPA05 & VPA07 are similar in nature and lie in same county, the CME will conduct across VPAs and counties wise sampling and follow the guidelines of Sampling and surveys for CDM project activities and programme of activities" (Version 04.0)/13/ & Guidelines for sampling and surveys for CDM project activities and programmes of activities" (Version 04.0)/32/.
	n. Double counting of emission reductions	Each VPA will implement a unique identification system for every efficient cooking unit distributed to avoid double counting of emission reductions.	The unique identification system is explained in detail in section A.3. of this document. The VPA is in adherence to the CME Management System as outlined in Section C of the PoA-DD.	A declaration/24/ has been provided by the CME confirming about the provision to eliminate double counting. At the time of implementation, each product will be assigned a unique serial ID to enable the identification of the product belonging to the VPAs.
	o. Crediting Period	The duration of the crediting period of the VPA does not exceed the end date of the registered PoA	The VPA will have a crediting period of 5 years which can be renewed twice, i.e. in total a maximum	According to GS4GG Principles and Requirements version 1.2 para 4.1.40/1/, "For distributed technology projects, the start date is the date of

		or shall be capped by the end date of the PoA. The final date for which ERs can be credited shall be no later than 20 years after the start date of the PoA.	issuance of 15 years. The VPA will not exceed the end date of the registered PoA.	implementation of the first unit under the project". VPA 05 & 07 has the crediting period of 5 years renewable twice. i.e., in total a maximum issuance of 15 years. The VPA will not exceed the end date of the registered PoA
Findings	No Findings			
Conclusion	The VVB has validated and accepted the general eligibility criteria that applies to all VPAs seeking Gold Standard Certification. The eligibility of the VPAs is found to be valid in accordance with the section 3.1.1 of GS4GG principles and requirements version 1.2/1/.			

SECTION D Validation Findings for VPAs including Improved Cookstoves

D.1 General description of the VPAs

Means of validation	The VPA-05 aims to distribute 20,000 ICS while VPA 07 aims to distribute 200,000 ICS at DRC with an expected annual average usage of 14,390 ICS for VPA 05 and 79,200 ICS for VPA 07 during the 1st crediting period, thus section-D shall be dealing with distribution/sold of ICS and its compliance with registered PoA-DD, VPA-DDs and applicable standard. The 02 Nos of VPAs to be included in the PoA involve the distribution/sold of ICS in Democratic Republic of Congo (DRC). The VPAs will provide efficient cooking system to locals which will be maintained by partner organisation and BURN Manufacturing Co /22/. The CME of the VPAs is BURN Manufacturing Co. There are 2 VPAs that are to be implemented under the improved cookstoves technology. The geographical boundary of VPAs is confined to Democratic Republic of Congo (DRC). The VPAs take forward the same goal as that of the PoA under which they seek inclusion. The 2 VPAs which will distribute/sell ICS are included and implemented under the PoA are as follows: GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) GS10789 VPA7: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC) The key information related to the technology to be installed has been confirmed from the manufacturer's specifications/33/. <u>Technology:</u> The type of systems distributed under the VPAs are as follows:
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Technology	Description			
	Product Model	Dimension	Avg. unit weight, kg	Thermal Efficiency, %
Improved Cookstoves	Jikokoa G3.5	(Ø 26 x 24.4 H) cms	4.0	48.1
	Jikokoa Xtra (G4)	(Ø 30.2 x 27 H) cms	5.5	44.6
	Ecoa Char MMJ	(Ø 26.7 x 22.8 H) cms	3.0	49.29

The improved cookstoves reduce fuel consumption through use of a stainless steel that increases combustion efficiency and retains heat. The stoves consist of a steel painted high gloss black epoxy powder coat body and a fuel chamber with a grate bottom to separate the ash from the fuel. The stove had one adjustable air inlet regulator. The chosen technologies will follow the host country norms and it has been cross-checked from the Manufacture technical specification and stove test reports furnished by CME /33/45/. The ICS will be distributed/sold & maintained by CME & Partner Organisation (Distributor)/22/.

Implementation status:

The implementation date of the VPAs GS11433 (VPA 05) and GS11435 (VPA07) is 23/12/2020 and 11/07/2022, verified from the submitted registration data of the first ICS distributed/sold by CME under VPA 5 (kobocollect- data base)/15/. The crediting cycle length is 5 years and type of the crediting period is renewal twice for the VPAs, as per Paragraph 4.1.40 of Principles & Requirements (Version 1.2)/1/.

The VPAs cover an estimated annual GHG emission reduction and other SDGs goals as per the table given below.

SDG Impacts	VPA 05	VPA 07
SDG 13	98,387 tCO2 (eq)	541,507 tCO2 (eq)
SDG 1	45.20%	45.20%
SDG 3	98.94%	98.94%
SDG 7	14,390	79,200
SDG 8	25	25

No-ODA

The VPAs are not being funded by any Annex-I party which could be verified through the no ODA declaration provided by CME to the validation team/24/.

Grievance Mechanism:

According to GS4GG principle and requirements v1.2/1/ para 4.1.28, "If the Consultation is conducted after the start date, the Project Developer shall provide further explanation of how comments received during the consultation are taken into account and implement a Grievance Mechanism in line with the

	Stakeholder Consultation & Engagement Requirements.” CME has established the grievance mechanism at the VPA level, and the following means can be used by the stakeholders to submit their grievances: 1. info@burnmfg.com 2. contact@altech-rdc.com 3. Contact numbers- BURN Kenya: +254 706 585629 Altech (DRC): +243 822 230 188 There is also an expression process book placed at the local office of Altech Group Head Office to enable the stakeholders to submit their grievances/feedback. All the details related to the management system and the grievance mechanism were confirmed from the CME representatives during the remote audit conducted on 26/07/2022/17/.
Findings	CAR#09(VPA05) & CAR#08(VPA07) was raised and resolved.
Conclusion	The validation team confirms that the information provided is complete and correct concerning the description of technology(ies) and/or measures to be used, the description is as per the VPA DDs/9/ and is following the GS4GG principles and requirement/1/ including a description of the purpose of the VPAs and explanation how the VPAs will reduce GHG emissions. The validation team confirms that: 1. The validation team has conducted a thorough and independent assessment of the implementation of the included VPAs against the GS4GG principles and requirements. 2. The validation team has assessed both quantitative and qualitative information on GHG emission reduction or net anthropogenic GHG removals provided in the programme documentation. 3. The validation team has assessed that the implementation and operation of the registered PoA and included VPAs, and the steps taken to report GHG emission reductions or net anthropogenic GHG removals comply with the relevant GS4GG principles and requirements. 4. The validation team has assessed that 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. Thus, the implementation of the VPAs is meeting the requirements of VVS for PoA version 3.0/7/ and GS4GG Principles and Requirements/1/.

D.1.1. Assessment of the Eligibility criteria of the VPAs with GS4GG Principles & Requirements

Eligibility Criteria Category	Eligibility criterion - Required condition	Justification
1. Types of Projects	Eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are identified in the Eligibility Principles and Requirements section.	Project is already one of the pre identified types as per section 3.1.1 (b) and automatically eligible for Gold Standard Certification as per section 4.1.3 of GS4GG Principles & Requirements/1/.
2. Location of	Projects may be located in any part	Location of the VPAs is in Democratic

Eligibility Criteria Category	Eligibility criterion - Required condition	Justification
Project	of the world.	Republic of Congo (DRC).
3. Project Area, Project Boundary and Scale	The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the Project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects)	The boundary for the VPAs in terms of a geographical area is defined as the territorial boundary Democratic Republic of Congo (DRC). All voluntary programme activities (VPAs) associated with this PoA will be implemented within the geographical boundary of the PoA. To avoid any double counting, all devices under this programme shall have a unique ID number, either inscribed or retained by the buyer, to uniquely identify the device avoiding any double counting and support traceability. The CME has also provided a declaration stating that it will be ensured there is no double counting at any stage of implementation/24/.
4. Host Country Requirements	Projects shall be in compliance with applicable Host Country's legal, environmental, ecological and social regulations.	The VPAs comply with the legal, environmental and ecological and social regulations of the host countries they are based in. None of the Host countries have mandatory regulation around the ICS distribution system which was confirmed from the independent research and local expert opinion/41/.
5. Contact Details	As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organisation (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of	Name and Contact details of Project Participants are given under the Appendix 2 of each VPA-DD/9/.

Eligibility Criteria Category	Eligibility criterion - Required condition	Justification
	insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	
6. Legal Ownership	Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.	Criteria for transfer of carbon credit ownership: For retroactive cycle VPA, the carbon credit ownership will be ensured through relevant provisions for example disclaimer on warranty/information cards, stove packaging, customer agreements / sales receipts /25/ consent form or may be collected via monitoring app etc/15/. or collecting stakeholder feedback on this issue during local stakeholder consultation (LSC).
7. Other Rights	As well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further project implementation in affected areas.	Not applicable
8. Official Development Assistance (ODA) Declaration	All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the	No ODA is involved in any of the VPAs included under the PoA. The CME has also provided a declaration meeting the stipulated criteria/24/.

Eligibility Criteria Category	Eligibility criterion - Required condition	Justification
	declaration at the time of Design Certification.	

D.2 Application of methodologies and standardized baselines

D.2.1 Reference to methodologies and standardized baselines

Means of validation	The methodology applied for the VPAs are Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) version 3.1./5/		
	The applicability conditions of the methodology TPDDTEC version 3.1 are validated below:		
	Applicability Criteria as per methodology	Justification from CME	Assessment
	This methodology is applicable to programmes or activities introducing technologies and/or practices that reduce or displace greenhouse gas (GHG) emissions from the thermal energy consumption of households and non-domestic premises	This VPA introduces highly efficient improved charcoal cookstoves (ICS) reducing woody biomass consumption for urban and peri-urban households, hence reducing GHG emissions from the thermal energy consumption.	The VPAs aim at distributing/selling ICS in for residential/institutional/commercial setups in Democratic republic of Congo (DRC). The distribution/selling of the improved cookstoves will reduce the dependency of the end-users on non-renewable woody biomass or charcoal. Thus, this criterion is applicable.
	The project activity is implemented by a project proponent and can include additional project participants. The individual households and institutions do not act as project participants.	This VPA is implemented by BURN Manufacturing Co, at the same time being the CME of the PoA. The individual households do not	The CME acts as the implementing entity and the beneficiaries do not act as the project participants.

		act as project participants.	
	The project boundary needs to be clearly identified, and the technologies counted in the project are not included in any other voluntary market or CDM project activity (i.e. no double counting takes place). In some cases there maybe another similar activity within the same target area.	The geographical project boundary of this VPA is defined as 16 Provinces within DRC as described in section A.4 of this document. All carbon standard registries (UNFCCC, GS and VERRA) have been checked and it is confirmed that the VPA has not been registered as a separate GS project activity, nor included as part of another registered GS (or other carbon standard) PoA nor that the project activity has been deregistered. Hence, it can be confirmed that double counting is being avoided.	The project is located in DRC and is confirmed by the VVB during the remote survey conducted on 26/07/2022/17/. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1 (b)/1/. The various carbon registries have been checked by the Validation team to confirm that the VPAs exclusively belong to the PoA. A declaration/24/ has been provided by the CME confirming about the provision to eliminate double counting. At the time of implementation, each product will be assigned a unique serial ID to enable the identification of the product belonging to the VPAs.
	The technologies each have continuous useful energy outputs of less than 150kW per unit (defined as the total useful energy delivered	The ICS promoted by this VPA have a capacity of less than the maximum 150kW per unit. The power output is	It has been cross-checked from the Manufacture technical specification/33/ that the ICS

	from start to end of operation of a unit divided by time of operation). For technologies or practices that do not deliver thermal energy in the project scenario but only displace thermal energy supplied in the baseline scenario, the 150kW threshold applies to the displaced baseline technology.	between 1.9 to 2.4 kW (depending on the model).	distributed will have a capacity less than 150 kW per unit.
	Using the baseline technology as a backup or auxiliary technology in parallel with the improved technology introduced by the project activity is permitted as long as a mechanism is put into place to encourage the removal of the old technology (e.g. discounted price for the improved technology) and the definitive discontinuity of its use. The project documentation must provide a clear description of the approach chosen and the monitoring plan must allow for a good understanding of the extent to which the baseline technology is still in use after the introduction of the improved technology.	Customers will be encouraged to discontinue and remove the baseline technology. Nevertheless, some of the households may continue using the baseline stoves. The monitoring will provide information to what extent households continue using the baseline technologies after the introduction of the ICS: Annual monitoring surveys will track the continued use of baseline technologies The parameter, $P_{p,y}$ is based on subsumed Project Fuel Tests and	It has been ensured that the end-users are discouraged to use the baseline stove. The distributed ICS will replace the traditional Cookstove, and it will reduce the consumption of fuel. However, in case there are any end-users who continue to use the baseline stove, then this factor will be accounted for through the annual surveys as part of the Kitchen performance test

		thus use of traditional stove/fuel is accounted for in project emissions calculations.	
	The project proponent must clearly communicate to all project participants the entity that is claiming ownership rights of and selling the emission reductions resulting from the project activity. For technology producers and the retailers of the improved technology or the renewable fuel in use, this must be communicated by contract or clear written assertions in the transaction paperwork. If the claimants are not the project technology end users, the end users will need to be informed and notified that they cannot claim for emission reductions from the project.	The project proponent will clearly communicate to all project participants that BURN Manufacturing Co. is claiming ownership rights and selling the ER credits resulting from the distribution of project technologies. Transfer of carbon rights will be explained at local stakeholder consultations Written messages on the stove packaging (strip and/or sticker on the box) and warranty booklet explaining that the rights on carbon credits are transferred from the end-users to BURN Manufacturing Co.	The CME has submitted contractual agreements/19/ with the implementing entities to ensure their part under the PoA. The agreement covers in detail the points related to carbon ownership, concerned responsibilities and avoidance of any double counting. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1/1/.

	Project activities making use of a new biomass feedstock in the project situation (e.g. shift from non-renewable to green charcoal, plant oil or renewable biomass briquettes) must comply with relevant Gold Standard specific requirements for biomass related project activities, as defined in the latest version of the Gold Standard rules. If the biomass feedstock is sourced from a dedicated plantation, the criteria must apply to both plantations established for the project activity AND existing plantations that were established in the context of other activities but will supply biomass feedstock.	This VPA does not involve use of a new biomass feedstock, hence this criterion is not applicable. End users continue to use non-renewable biomass in the project scenario.	Not Applicable
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	Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the project fuel/stove combination are estimated with adequate precision. The project fuel/stove combination may include instances in which the project stove is a baseline stove.	This criterion is not applicable. Since this criterion is only relevant in case of introduction of a new biomass feedstock. Nevertheless, qualitative surveys are conducted as part of the monitoring surveys to investigate air quality with the project	Not applicable. But the CME will monitor the reduction in the indoor air pollution after using the improved cookstoves.
	Records of renewable fuel sales may not be used as sole parameters for emission reduction calculation but may be used as data informing the equations in section 2.0 of the methodology. These records need to be correlated to data on distribution and results of field tests and surveys confirming (a) actual use of the renewable fuel and usage patterns (such as average fraction of non-renewable fuels used in mixed combustion or seasonal variation of fuel types), (b) GHG emissions, (c) evidence of CO levels not deteriorating (d) any further factors effecting emission	This criterion is not applicable. Since this criterion is only relevant in case of introduction of a new biomass feedstock.	Not applicable.

	reductions significantly.		
Findings	No Findings raised.		
Conclusion	The validation team confirms that the VPAs i.e., VPA 05 & VPA07 meet all the applicability conditions of the applied methodology /5/.		

D.3 Project boundary, sources and GHGs

Means validation of	The project boundary basically defines the physical and geographical boundary of the project facility, and it is well defined in the VPA-DDs/9/ (section B3). The project boundary includes the community households and institutions to provide efficient cooking system to locals of the Democratic Republic of Congo (DRC). Therefore, the project boundary covers the national boundary of all the countries included in the PoA. The project boundary is clearly defined in the VPA-DDs/9/ as per the applied methodology/5/. Emissions sources included in the project boundary have been appropriately included in the VPA-DDs. CO₂, CH₄ and N₂O emissions due to use of non-renewable biomass in the traditional stove for baseline scenario (for all the project sites) and the project scenario has reduced emissions, thus CO₂, CH₄ and N₂O GHGs are included. This is in line with Equation 13 of Annex 3 of the applied methodology/5/, where non – CO₂ emission factor of fuels (EF_b, fuel, nonCO₂) is taken into consideration.
Findings	CAR#01(VPA05) & CAR#01(VPA07) is raised and resolved.
Conclusion	The project boundary, sources and GHGs have been determined in-line with the applied methodology/5/.

D.4 Baseline scenario

Means validation of	The baseline scenario in all the VPAs is same as the one set at PoA level. CME has applied an approved baseline and methodology TPDDTEC Version 3.1/5/ which is approved under GS4GG programme. These VPAs involve distribution of ICS to provide efficient cooking system to locals of the countries included under the PoA. According to the applied methodology, the baseline scenario is that non-renewable biomass is used for cooking in the absence of the project activity. According to remote survey conducted by the VVB to confirm that all the baseline users do not have access to efficient cooking systems and the beneficiaries in the countries where the VPA is implemented are travelling long distances to purchase charcoal in bulk from the wholesale markets rather than purchasing from the local retail markets, unless it is urgent since it is cheaper. . The assessment team has reviewed the VPA-DDs/9/ in line with the
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	applied methodology/5/ and it is confirmed that the CME has correctly identified the baseline scenario.
Findings	CL#08(VPA05) & CAR#09 & CL#08(VPA07) is raised and resolved.
Conclusion	The validation team based on the description provided above with regard to the assessment of the requirements confirms that: (a) All the assumptions and data used by the project participants are listed in the VPA-DDs/9/ and or its annexures, including their references and sources. (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the VPA-DDs/9/. (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable. (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the VPA-DDs/9/. (e) The approved baseline methodology has been correctly applied to identify the most plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed PoA. The validation team confirms that it has taken other steps and other sources of information used to cross-check the information contained in the PoA-DD/04/, wherever applicable, as listed above.

D.5 Demonstration of Additionality

Means of validation	Applicability conditions	Justification by the Project proponent	Means of validation
	Specify the methodology or activity requirement or product requirement that establish deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	Community Services Activity Requirements (Version 1.2), paragraph 4.1.9: "Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of Design Certification: (a) Positive list (Annex B) (b) Projects located in	The VPAs aim to distribute Improved Cookstoves to HH/Institutions of the Democratic republic of Congo (DRC) which falls under LDC list of UNCTAD/40/. Therefore, in accordance with Paragraph 4.1.9(b) of Community Service Activity Requirements (Version 1.2)/3/, the VPAs are not required to demonstrate

		LDC, SIDS, LLDC (c) Micro-scale projects"	additionality.
	Describe how the proposed project meets the criteria for deemed additionality.	Project activities under the VPA are solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in – ICS: ≤ 600 MWh/1.8 GWhth of energy savings per year or WPS: ≤ 600 tonnes of emission reductions per year. Therefore, 4.1.9, (a) as per the Community Services Activity Requirements is met. Moreover, the VPA includes distribution of ICS in host countries which is a LDC/LLDC, therefore condition (b) is also met.	The VPAs will be in accordance with item 1.1.3 of Annex B – positive list mentioned in the 'Community Services Activity Requirements', Version 1.2./3/ wherein all the VPAs will only be composed of microscale units. This demonstration has been confirmed from the ER sheets/28/. This is in accordance with GS4GG Principles and Requirements.
Findings	CAR#10(VPA07) is raised and resolved		
Conclusion			

D.5.1 Ongoing financial need

Means validation of	It has been confirmed from the no ODA declaration/24/ that there is no provision for public funding available for the VPAs. OFN is required only at time of renewal according to the para 4.1.45 of Principles and requirements /1/.
Findings	No finding was raised.
Conclusion	The CME has provided the ODA declaration which confirms that there was no provision for public funding available for the VPAs.

D.5.2 Prior consideration

Means validation of	The required documents were submitted to Gold Standard for preliminary review (time of first submission) within one year of the project start date. The documentation was found meeting the
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	requirement of retroactive projects since these were submitted within one year from the project start.
Findings	No finding was raised
Conclusion	The Gold Standard requirement have been met.

D.6 SDG outcome assessment

Means of validation	The monitoring plan in the VPA-DD /9/ is correctly applied to the VPAs. The monitoring plan has been found to be in compliance with the requirements of the applied methodology TPDDEC Version 3.1 /5/.			
	Sustainable Development Goals Targeted	SDG Description	SDG Impact Indicator (Proposed or SDG Indicator)	VVB Assessment
	13 Climate Action (mandatory)	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Emission Reductions	The use of the highly efficient improved cookstoves with efficiency of 48.1% will result in decrease in consumption of charcoal which will ultimately result in emission reductions and eventually reduce the effects of Climate change in the host country which is LDC.

	1 End poverty in all its forms everywhere	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial	Monetary savings related to the purchase of charcoal/firewood and/or time savings for the procurement of the fuel	Through the provision of improved cookstoves to the end-users, the VPAs aim to give access to basic services like efficient cooking to the people in least developed countries.
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		services, including microfinance		
	3 Ensure healthy lives and promote well-being for all at all ages	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Perceived quality of air	By implementing these VPAs, the quality of lives of the people in the host countries will improve significantly as fewer people will fall sick due to less indoor pollution.
	7: Ensure access to affordable, reliable sustainable and modern energy for all	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services 7.B By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support	Number of sold/distributed ICS in use	The VPAs will aim to provide access to beneficiaries to clean and affordable energy in the form of improved cookstoves.
	8: Promote	8.5 By 2030, achieve full and	Number of jobs created	The VPAs will also create

	sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value		employment and offer jobs to people in the underdeveloped countries and promote entrepreneurship and formalization of small enterprises.
Findings	CL#03, CL#05, CAR#02(VPA05) & CAR#02, CL#03, CL#05 (VPA07) is raised and resolved			
Conclusion	The SDGs chosen by CME are accurate & the monitoring of all the parameter align with the methodology of TPDDTEC version 3.1/5/			

D.6.1 Data and parameters:

Means of validation	The monitoring plan in the PoA-DD/04/ is correctly applied to the PoA. The monitoring plan has been found to be in compliance with the requirements of the applied methodology TPDDTEC Version 3.1 /5/. The values of ex-ante parameter and monitored parameters for ICS can be found in the table given below. Parameter(s) fixed ex-ante: Improved Cookstoves			
	Relevant SDG Indicator	Parameter	Value in VPA-DDs	Assessment
	SDG 13	CO ₂ emission factor arising from use of fuels in baseline Scenario, EF _{b,CO2}	Fuelwood (Residential): 112 tCO ₂ /TJ Fuelwood (Commercial/ Institutional): 112 tCO ₂ /TJ	The value for this parameter has been applied as 112 for both residential and commercial institutions and it has been obtained through IPCC default value as per 2006 IPCC Guidelines for National Greenhouse Gas Inventories, volume 2, chapter 2 (Table 2.4 and 2.5)/20/. The applied value has been cross-checked from the SDG data recording sheet for baseline survey/29/

				and each parameter value was further cross-checked for consistency against the baseline survey forms/30/.
	SDG 13	Non-CO ₂ emission factor arising from use of fuels in baseline scenario, EF _{b,non-CO2}	Fuelwood (Residential): 9.46	The value for this parameter has been applied as 9.46 tCO ₂ /TJ which has been sourced from the updated version of the applied methodology.
	SDG 13	CO ₂ emission factor arising from use of fuels in project Scenario, EF _{p,CO2}	Fuelwood (Residential/ Commercial/ Institutional): 112	The value for this parameter is 112 tCO ₂ /TJ for both residential and commercial institutions and it has been sourced from IPCC default value as per 2006 IPCC Guidelines for National Greenhouse Gas

				Inventories /20/. The applied value has been cross-checked from the SDG data recording sheet for baseline survey/29/ and each parameter value was further cross-checked for consistency against the baseline survey forms/30/.
	SDG 13	Non-CO ₂ emission factor for methane arising from use of fuels in project Scenario, $EF_{p,non-CO_2}$	Fuelwood (Residential): 9.46	The value for this parameter has been applied as 9.46 tCO ₂ /TJ which has been sourced from the updated version of the applied methodology.
	SDG 13	Net calorific value of the fuels used in the baseline, NCV_b	Fuelwood: 0.015 TJ/ton	The value of this parameter has been applied as 0.0156 TJ/ton which is the

				default value from the IPCC default value for Wood: IPCC 2006 Guidelines for National Greenhouse gas Inventories/20/.
	SDG 13	Net calorific value of the fuels used in the project, NCV_p	Fuelwood: 0.015 TJ/ton	The value of this parameter has been applied as 0.015TJ/ton which is the default value from the IPCC default value for Wood: IPCC 2006 Guidelines for National Greenhouse gas Inventories/20/.
	SDG 13	Fraction of biomass used that can be established as non – renewable biomass in the project scenario i during year y, $f_{NRB,i,y}$	Fuelwood: 0.73998 fraction	The variables for calculating f_{NRB} i.e., H (Total consumption of woody biomass), RB (Renewable biomass) and NRB (Non-renewable biomass) have been calculated using CDM Tool 30 “Calculation of the fraction of Non-renewable Biomass” (Version 03.0)/42/. The calculations have been verified from the f_{NRB} calculation sheets/6/ and relevant literature references valid for this project. Thus, the applied f_{NRB} value is value and appropriate for this VPA.
	SDG 13	Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/household/day, $P_{b,y}$	Charcoal tonnes/house hold/day: 1.35748	The value of this parameter has been applied as charcoal:1.35748 tonnes/household/day which is based on Kitchen Performance tests conducted for 3 consecutive dates by measuring fuel and moisture in fuel. The final value is obtained from the compiled data

				and averaged the data of 3 days for specific fuel consumption/29/30/. Thus, the value has been validated for DRC which has been fixed ex-ante. The applied value has been cross-checked with the USAID DHS Program/40/ and is found to be comparable.	
	SDG 13	Wood charcoal conversion factor	to 6	The value of this parameter has been applied as 6 which is a default IPCC value (1996 IPCC Guidelines for National Greenhouse Gas Inventories) (https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf). The value is used to calculate fuel savings in fuel wood equivalent.	
	Data and parameters to be monitored: Improved Cookstoves				
	Relevant SDG Indicator	Parameter	Value in VPA-DD	Frequency	Assessment

	or				
	SDG 13	Specific fuel consumption for an individual technology in project scenario p during year y converted to tonnes/household/day, $P_{p,y}$	VPA05- 0.53475 for charcoal VPA07- 0.53475 for charcoal	Every two years	The CME has applied the value as per the Project KPT results from 1st performance review/34/ and the baseline stove in the project area. However, the actual value will be calculated through the annual monitoring surveys as part of the project Kitchen performance Test. The applied frequency and calculation method is in line with the applied methodology/5/.
	SDG 13	Usage rate in project scenario p during year y, $U_{p,y}$	90%	Annual	The CME has anticipated the highest possible value of 90% for the parameter but the actual value will be calculated ex-post using monitoring and survey methods. The applied frequency and calculation method is in line with the applied methodology/5/.
	SDG 13	Technologies in the project database for project scenario p through year y, $N_{p,y}$	VPA05- 15,989 VPA07- 88,000	Continuous	The total number of appliances deployed will be monitored continuously and captured in the project database.

					The applied frequency and calculation method is in line with the applied methodology/5/.
	SDG 13	Leakage in project scenario p during year y, $LE_{p,y}$	0 tCO ₂ /Yr	Every two years	The CME has estimated the potential leakage to be quite low and has estimated a value as 0. The actual value will however be captured using baseline and monitoring surveys. The applied frequency and calculation method is in line with the applied methodology/5/.
	SDG 13	Efficiency of the project cookstove, $\eta_{new,i}$	Monitored parameter	Annually	The CME has assessed the value of efficiency based on the WBT/36/ test performed for ICSs in DRC. The applied frequency and calculation method is inline with the applied methodology/5/.

	SDG 13	Adjustment to account for any continued use of pre-project devices (baseline stove) in the project scenario during the year y , μy	Monitored parameter	Annually	Any continued use of the pre- project devices will be captured using the monitoring surveys. The applied frequency and calculation method id inline with the applied methodology/5/.
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SDG 1	Percentage of households reporting money saving due to reduced fuel consumption with clean energy products, HHs project	45.20%	Biennially	An elaborate database will be maintained which will capture the details related to all clean energy products distributed as part of the VPAs. The applied frequency and calculation method is in line with the applied methodology/5/.
SDG 3	Percentage of households confirming less smoke with the use of improved stove; HHs smoke project	98.94%	Biennially	An elaborate database will be maintained which will capture the details related to percentage of households confirming less smoke with the use of project stove. as part of the VPAs. The applied frequency and calculation method is in line with the applied methodology/5/.
SDG 7	Number of persons using ICS within the project area during year y; HHs clean project	VPA 05- 14,390 VPA 07- 72,000%	Continuous	The total number of persons using ICS within the project area will be captured in the project database. The applied frequency and calculation method is in line with the applied methodology/5/.
SDG 8	Total number	VPA05-25	Annually	The total number

		of jobs created	VPA07-25		of jobs created will be cross-checked through the employee list, contracts and pay slips.
	Sampling Plan According to the requirements of TPDDTEC version 3.1., the CME will conduct Usage survey and Monitoring Survey. For usage survey the usage parameter will be weighted to be representative of the quantity of project technologies of each age being credited in each project scenario. The minimum total sample size is 100 randomly selected households, with at least 30 samples for project technologies of each age being credited. For Monitoring Survey, a survey is carried out annually to assess end-user characteristics such as technology use, fuel consumption and seasonal variation. The sample size is appropriately sampled from each age group and enough so that the results comply with the 90/10 rule. In case of not meeting the required confidence/precision, lower bound value will be used. The WBT shall be carried out along with the project KPTs prior to 1st issuance and then subsequently WBTs shall be carried out annually to monitor the degradation in the efficiency of the ICS. Sampling Plan for monitoring parameters The objective of the sampling plan for this VPA is to determine: (i) $\eta_{new,i}$: Efficiency of the project cookstove. This parameter will be monitored with 90% confidence and 10% precision annually for each VPA, or 95/10 in case of cross-VPA sampling or biennial monitoring (when applicable). (ii) $U_{p,y}$: Usage rate in project scenario p during year y. This would be based on usage survey, to be conducted upon the representative sample of operational stoves. (iii) μ_y: Adjustment to account for any continued use of pre- project devices (baseline stove) in the project scenario during the year y,				

	(iv) $P_{p,y}$: Specific fuel consumption for an individual technology in project scenario. The actual value will be determined based on the Kitchen Performance Test to be carried out in accordance with Annex 4 of the applied methodology TPDDTEC version 3.1. For ex- ante purpose, project KPT has been done following the 90/30 confidence/ precision. (v) $N_{p,y}$: Project technology-days for project database for project technology. This parameter will be monitored with 90% confidence and 10% precision annually for each VPA, or 95/10 in case of cross-VPA sampling or biennial monitoring (when applicable). (vi) $P_{ep,y}$: Quantity of fuel consumed by a baseline technology y in project scenario. This will be based on survey questionnaire, to be conducted upon the representative sample of project technologies. The assessment team confirmed that the monitoring parameters are sufficient to calculate the emission reductions in accordance with the methodology. The parameters will be calculated or measured as mentioned above section. The validation team confirms that list of parameters identified by the CME and as mentioned in the VPA-DDs/09/are in line with the monitoring methodology and SDG monitored parameters will be assessed on the basis of monitoring frequency mentioned.
Findings	CAR#04, CAR#05, CL#07(VPA05) & CAR#04, CAR#05, CAR#09,CL#07 (VPA07) are raised and resolved
Conclusion	The SDGs chosen by CME are accurate & the monitoring of all the parameter align with the methodology of TPDDTEC version 3.1/5/

D.7 Estimation of SDG impacts or net anthropogenic removals

D.7.1 Equations and parameters applied to calculate SDG impacts

Means validation of	The VPAs applies methodology, for ICS. The methodological choices have been explained below: The applied methodology TPDDTEC version 3.1/5/ defines the methodological steps to determine the project emissions, baseline emissions, leakages and anthropogenic emissions by the proposed project activity. (1) SDG 13:
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	Baseline Scenario Fuel Consumption Calculation The baseline emissions in case of different fuel in project and baseline scenario is calculated using the below equation: Baseline Emissions $BE_{b,y} = B_{b,y} * ((f_{NRB,b,y} * EF_{b,fuel,CO2}) + EF_{b,fuel,non-CO2}) * NCV_{b,fuel}$ Where: $BE_{b,y}$ Emissions for baseline scenario b during the year y in tCO₂e $B_{b,y}$ Quantity of fuel consumed in baseline scenario b during year y, in tons $f_{NRB,y}$ Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass $NCV_{b,fuel}$ Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton) $EF_{b,fuel,co2}$ CO₂ emission factor of the fuel that is substituted or reduced. 112 tCO₂/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel $EF_{b,fuel,nonco2}$ Non-CO₂ emission factor of the fuel that is substituted or reduced $B_{b,y} = N_{p,y} * P_{b,y}$ Where: $N_{p,y}$ Project technology-days in the project database for project scenario p through year y $P_{b,y}$ Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day Project Scenario Fuel Consumption Calculation $PE_{p,y} = B_{p,y} * ((f_{NRB,p,y} * EF_{p,fuel,CO2}) + EF_{p,fuel,non-CO2}) * NCV_{p,fuel}$ $B_{p,y} = N_{p,y} * ((P_{p,y} * U_{p,y}) + (P_{b,y} * (1 - U_{p,y})))$ Where: $PE_{p,y}$ Emissions for project scenario p during the year y in tCO₂e $B_{p,y}$ Quantity of fuel consumed in project scenario p during year y, in tons, and as derived from the statistical analysis conducted on the data collected during the project performance field tests $N_{p,y}$ Project technology-days in the project database for project scenario p through year y $P_{p,y}$ Specific fuel consumption for an individual technology in project scenario p during year y converted to tons/day $P_{b,y}$ Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day $U_{p,y}$ Cumulative usage rate for technologies in project scenario j during year y, based on cumulative installation rate and drop-off rate
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	$EF_{p,fuel,co2}$ CO2 emission factor of the fuel that is substituted or reduced. $EF_{p,fuel,nonco2}$ Non-CO2 emission factor of the fuel that is substituted or reduced in project scenario $NCV_{p,fuel}$ Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton) $f_{NRB,y}$ Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass Emission Reductions The overall GHG reductions achieved by the project activity are then calculated as follows: $ER_y = \sum BE_{b,y} - \sum PE_{p,y} - \sum LE_{p,y}$ Where: ER_y Emission reduction for total project activity in year y (tCO2e/yr) $BE_{p,y}$ Baseline emissions for baseline scenario b in year y (tCO2e/yr) $PE_{b,y}$ Project emissions for project scenario p in year y (tCO2e/yr) $LE_{p,y}$ Leakage for project scenario p in year y (tCO2e/yr) (2) SDG 1 The contribution of the VPA to SDG 1 will be confirmed through a random sample survey (in conjunction with the annual monitoring survey for the project) with a representative number of households. Households will be asked to confirm if there has been monetary savings through use of product as compared to the baseline scenario. In case that households confirm, the same can be used to confirm that the project contributes positively to SDG 1. (3) SDG 3 The contribution of the VPA to SDG 3 will be confirmed through a random sample survey (in conjunction with the annual monitoring survey for the project) with a representative number of households. Households will be asked to confirm if there has been reduction in smoke with the use of improved stove in the project scenario as compared to the baseline scenario. In case that households confirm, the same can be used to confirm that the project contributes positively to SDG 3. (4) SDG 7 The contribution of the VPA to SDG 7 will be confirmed through the number of ICS distributed and in operation. (5) SDG 8 The contribution of the VPA to SDG 8 will be confirmed by the number of jobs or new entrepreneurship activities created due to the project.
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Findings	CL#04, CAR#03(VPA05) & CL#04, CAR#03(VPA07) is raised and resolved
Conclusion	The methodological choices are justifiable and appropriate as per GS4GG requirements. All the values applied, and calculations are reviewed from the SDG calculation sheet/28/, baseline survey sheet/29/ and fNRB calculation sheet/6/ and were found to be acceptable by the assessment team.

D.7.2 Ex ante calculation of net anthropogenic GHG removals

Means validation	of	The VPAs applies methodology TPDDTEC version 3.1/5/; for ICS distribution in Democratic Republic of Congo (DRC), to provide efficient cooking system. The methodological choices have been explained below: The applied methodology TPDDTEC version 3.1/5/ defines the methodological steps to determine the project emissions, baseline emissions, leakages and anthropogenic emissions by the proposed project activity. Baseline emissions are calculated as follows: $BE_{b,y} = B_{b,y} * ((f_{NRB,b,y} * EF_{b,fuel,CO2}) + EF_{b,fuel,non-CO2}) * NCV_{b,fuel}$ Where: $BE_{b,y}$ Emissions for baseline scenario b during the year y in tCO₂e $B_{b,y}$ Quantity of fuel consumed in baseline scenario b during year y, in tons $f_{NRB,y}$ Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass $NCV_{b,fuel}$ Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton) $EF_{b,fuel,co2}$ CO₂ emission factor of the fuel that is substituted or reduced. 112 tCO₂/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel $EF_{b,fuel,nonco2}$ Non-CO₂ emission factor of the fuel that is substituted or reduced $B_{b,y} = N_{p,y} * P_{b,y}$ Where: $N_{p,y}$ Project technology-days in the project database for project scenario p through year y $P_{b,y}$ Specific fuel consumption for an individual technology in
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	baseline scenario b during year y converted to tons/day
	Project Scenario Fuel Consumption Calculation
	$PE_{p,y} = B_{p,y} * ((f_{NRB,p,y} * EF_{p,fuel,CO_2}) + EF_{p,fuel,non-CO_2}) * NCV_{p,fuel}$
	$B_{p,y} = N_{p,y} * ((P_{p,y} * U_{p,y}) + (P_{b,y} * (1 - U_{p,y})))$
	Where:
$PE_{p,y}$	Emissions for project scenario p during the year y in tCO ₂ e
$B_{p,y}$	Quantity of fuel consumed in project scenario p during year y, in tons, and as derived from the statistical analysis conducted on the data collected during the project performance field tests
$N_{p,y}$	Project technology-days in the project database for project scenario p through year y
$P_{p,y}$	Specific fuel consumption for an individual technology in project scenario p during year y converted to tons/day
$P_{b,y}$	Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day
$U_{p,y}$	Cumulative usage rate for technologies in project scenario j during year y, based on cumulative installation rate and drop-off rate
$EF_{p,fuel,co2}$	CO ₂ emission factor of the fuel that is substituted or reduced.
$EF_{p,fuel,nonco2}$	Non-CO ₂ emission factor of the fuel that is substituted or reduced in
$NCV_{p,fuel}$	project scenario Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)
$f_{NRB,y}$	Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass.
	Emission Reductions
	$ER_y = \sum BE_{b,y} - \sum PE_{p,y} - \sum LE_{p,y}$
	Where:
ER_y	Emission reduction for total project activity in year y (tCO ₂ e/yr)
$BE_{p,y}$	Baseline emissions for baseline scenario b in year y (tCO ₂ e/yr)
$PE_{b,y}$	Project emissions for project scenario p in year y (tCO ₂ e/yr)
$LE_{p,y}$	Leakage for project scenario p in year y (tCO ₂ e/yr)

Findings	CAR#03(VPA05) & CAR#03(VPA07) is raised and resolved
Conclusion	The formulae and approach used for ex ante calculation of baseline emissions has been correctly presented and implemented as per methodology TPDDTEC Version 3.1/5/. They have been given consistently within the ER sheet/28/ and VPA-DDs/9/.

D.8 Start date, crediting period type and duration

Means of validation	According to GS4GG Principles and Requirements version 1.2 para 4.1.40/1/, "For distributed technology projects, the start date is the date of distribution of the first unit under the project". VPAs 05 & VPA07 have the crediting period of 5 years renewable twice. GS11433 (VPA05) has start date as 23/12/2020 and crediting period start date as 01/01/2021 and GS11435 (VPA07) has 11/07/2022 as start date and crediting period start date as 11/07/2022. The expected certification cycle of the VPA is 15 years.
Findings	CL#06 (VPA05) & CL#06,CL#09(VPA07) is raised and resolved
Conclusion	The lifetime and crediting period of the VPAs lies within the crediting period of the PoA and is in accordance with GS4GG Principles and Requirements/1/.

D.9 Environmental impacts

Means of validation	It has been indicated in the VPA-DD /09/, that the environmental analysis is not necessary by the host country for ICS project activities being implemented in DRC and environmental impact does not depend on the specific geographical location where the cook stoves are used. This is deemed appropriate in the context of the ECOA_BURN MULTI-COUNTRY CLEAN COOKING PROGRAMME PoA and as per the description of basic principles relating to the protection of the environment /46/ of Ministry of environment, nature protection and tourism of DRC states, infrastructure projects that may have an impact on the environment are subject to an environmental and social impact pre-study. Projects implementing improved cook stoves are not considered as infrastructure projects with environmental impacts. The validation team confirms that improved/efficient cook stove are not categorised as infrastructure projects, hence the EIA is not required for this type of projects. No negative impacts can be identified.
Findings	No findings raised
Conclusion	No EIA is required by the host country for ICS project activities and there are no negative impacts from the distributed/sold improved cook stoves, as there are not considered as infrastructure projects with environmental impacts/46/.

D.10 Stakeholder consultation

Means of validation	The CME has conducted the LSC on 13/08/2020 and 14/08/2020 as checked from LSC attendance sheet and LSC photos /26/. The LSC has been conducted at VPA level as per section F of the PoA-DD /04/. Sample stakeholders who attended the meeting were also interviewed during the remote audit and their feedback on the project was positive. Furthermore, they have also confirmed that they have attended the LSC meeting. The summary of the comments /26/
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	received during the meeting is complete and CME has taken appropriate steps to address each query/concern and gathered feedback. The Stakeholder Feedback Round started on 13/09/2021 and ended on 13/11/2021, a chance to provide comments and raise questions. PP had invited /26/ all participants who attended the LSC meeting for further comments and also to those who have been invited for the LSC meeting and also included more stakeholders involved in policy-making and representatives from NGOs working in the region of project. CME used different invitation methods like invitation in person, advertisement in online local newspapers, BURNs website, social medias (Facebook, twitter and LinkedIn), Email and SMS. The same was confirmed by the validation team during the remote interviews. All the comments received during the SFR period have been provided in the LSC report /26/. The validation team based on review of LSC report /26/ confirms that the feedback from the SFR has been appropriately addressed by the CME. Furthermore, as per the interviews, validation team confirms that there is an effective continuous consultation/grievance mechanism process so any stakeholders can access, approach and provide feedback to CME if they want. The grievance register /26/ has been placed in Altech office in Kinshasa, DRC as confirmed by the validation team during the remote interviews. This is deemed appropriate and acceptable to the validation team.
Findings	CL#10(VPA07) raised and resolved.
Conclusion	Stakeholder consultation report has been reviewed and the validation team confirm that local stakeholder consultation meeting has been conducted by CME and grievance mechanism has been included to address grievances related to the project and contact details has been provided in local stakeholder consultation report /26/.

D.11 Sustainability Assessment

D.11.1 Safeguard principles assessment

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Assessment team's Opinion/ justification for the mitigation measure
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined	No	The project is implemented on the ground by BURN in collaboration with local distribution partners. The project developer takes care that the project respect internationally proclaimed human rights and is no complicit in	The CME and the VPAs have to respect related laws of the host countries and will not lead to violations of human rights or discrimination of any kind. Host countries have ratified UN Human Rights Conventions/37/.

in the Universal Declaration of Human Rights		violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. DRC has ratified many UN Human Rights Conventions.	
2. The Project shall not discriminate with regards to participation and inclusion	No	The project will not discriminate with regards to participation and inclusion as the improved cookstoves (ICS) can be purchased and used by everybody within the project boundary willing to participate in the program.	The VPAs are about access to energy efficient cooking system, it will not discriminate with regards to participation and inclusion for both men & women. This is in line with the Gender equality and HR policy of the company/38/.
Principle 2: Gender Equality			
1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)	No	The Project is in line with DRC's constitution ² . DRC has ratified the principle of equality into its respective constitution (Article 14), which does not tolerate any discrimination concerning women. Article 14 mentions the following "the public powers see to the elimination of any form of discrimination concerning women and assure the protection and the promotion of their rights. They take, in all the domains, notably in the civil, political, economic, social and cultural domains, all the measures appropriate to assure the total realization and full participation of women in the development of the nation. Women have the right to an equitable	The VPAs are about access to efficient cooking system, for distribution work or volunteer work in the VPAs, the principle of the equal pay for equal work will be applied and organized in way to provide the conditions for equitable participation of men and women. The ICS will reduce consumption of biomass fuel and the time and effort needed by women to collect it for cooking for their families. So, the VPAs do not involve and is not complicit in any form of discrimination based on gender difference in line with the National Gender Policy of the host countries/11/. This is also in line with the Gender equality and HR policy of the company/38/.

² <http://extwprlegs1.fao.org/docs/pdf/cng128142.pdf>

		representation within the national, provincial and local institutions. The state guarantees the implementation of man woman parity in these said institutions.”	
Principle 3: Community Health, Safety and Working Conditions			
3. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	No	The project activity doesn't expose the community to increased health risks and is not adversely affecting the health of workers and the community. Cooking with improved cookstoves is actually safer than any other open flame stove use or traditional stoves. The workers participating in the project activity are not exposed to unsafe or unhealthy work environments as the sale/distribution of efficient cookstoves or the monitoring activities of the project will not include any hazardous chemicals or other hazardous material.	Local communities will benefit from efficient cookstove. The project activities do not pose risks to the health of the community, the VPAs will reduce the risk of air borne illness for local communities and indoor air pollution caused by cooking.
Principle 4.1 Sites of Cultural and Historical Heritage			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	The project activity doesn't include sites, structures or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture. The Project will introduce efficient cookstoves in urban and peri- urban households in DRC and it does not require alteration, damage or removal of any historical, artistic, traditional, religious or cultural heritage issues.	The VPAs involves distribution of ICS to HH/Institutions in LDCs listed in the PoA. Thus, it confirms that the project area does not include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture.
Principle 4.2 Forced Eviction and Displacement			

Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project activity will introduce portable improved cookstoves in urban and peri-urban households in DRC and therefore no physical or economic relocation of people is involved. The use of efficient cookstoves is voluntarily.	The VPAs involves distribution of ICS in the LDCs listed under the PoA. Thus, it confirms that the project does not require or cause physical or economical relocation of people (temporary or permanent, full or partial).
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Principle 4.3 Land Tenure and Other Rights

a. Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership? b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership?	No	The project doesn't require any change to land tenure arrangements and/or other rights. The project does not involve land-use tenure.	The VPAs involves distribution of ICS in multiple countries (LDCs) listed under the PoA. a. The project does not require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership. Th project does not involve land use tenure and there are no uncertainties with regards to land tenure, access rights, usage rights or land ownership.
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Principle 4.4 Indigenous People

Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	There are no indigenous people present within the area of influence nor the project is located on territory claimed by indigenous people.	The VPAs will benefit the population within the host country and will not influence the land/territory claimed by indigenous people/43/.
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Principle 5 Corruption

The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	No	The Project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. The project is, in fact, implemented on the ground by BURN. The ethical codes of BURN and other project partners are against corruption.	The VPAs involves distribution of ICS to the LDCs included under the PoA, VPAs are not involved or will contribute to corruption. VPAs will follow the UN Convention against corruption/23/.
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Principle 6.1 Labour Rights			
1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions	No	The project is implemented on the ground by the enterprise BURN in collaboration with other project partners. The employees' rights are a cross-cutting issue and respected in all of the projects of BURN and other project partners. DRC has ratified many ILO Conventions, amongst others convention 100 (Equal Remuneration Convention) and convention 98 (Right to Organise and Collective Bargaining Convention) ³ . All employees will work voluntarily for the project, no forced labour is used and all employment is in compliance with national laws and consistence with the principles and standards of the ILO conventions. In fact, DRC has ratified many ILO Conventions, amongst others convention 29 (Forced Labour Convention) and 105 (Abolition of Forced Labour Convention). ⁴	The VPAs follows the labour laws and policies of the host country where VPA is being implemented and the CME ensures that all the employment is within ILO fundamental conventions/39/.
2. Workers shall be able to establish and join Labour organisations.	No	The workers are able to establish and join labour organizations.	The VPAs puts no constraints / limitation on employees to form a union.
3. Working agreements with all individual	No	The working agreements with the	The CME will supervise local partners to follow

³ https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102981

⁴ https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102981

workers shall be documented and implemented and include: a. Working hours (must not exceed 48 hours per week on a regular basis), AND b. Duties and tasks, AND c. Remuneration (must include provision for payment of overtime), AND d. Modalities on health insurance, AND e. Modalities on termination of the contract with provision for voluntary resignation by employee, AND f. Provision for annual leave of not less than 10 days per year, not including sick and casual leave.		individual workers will be documented and implemented and the minimum requirements stated in section 3.6.1. of GS4GG Safeguarding Principles & Requirements (version 1.2) will be respected whenever applicable.	the labour laws of the host country about the employees' working hours, remuneration, annual leave in line with its Gender equality and HR policy/38/. The employment model related to the VPAs will be also locally and culturally appropriate.
4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)	No	All the possible staff hired has a minimum age of 18. DRC has ratified ILO Convention 182 (Worst Forms of Child Labour Convention). ⁵	The CME VVBs not promote / or is complicit in child labour the age of all the staffs hired will be checked through ID cards to make sure that no one is below 18. All the laws of the land will be obeyed by VPAs & local implementers. This is in line with the Gender equality and HR policy of the company/38/.
5. The Project Developer shall ensure the use of appropriate	No	5. All the works will be made by using appropriate equipment,	It was confirmed from the CME representative and the VPA implementer

⁵ https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102981

equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures		training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.	that workers are provided with appropriate equipment, training and the accidents and incidents documentation is maintained and the emergency preparedness and response measures is in place. This is in line with the Gender equality and HR policy of the company/38/.
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Principle 6.2 Negative Economic Consequences

1. Does the project cause negative economic consequences during and after project implementation?	No	The project is based on a commercial model selling improved cookstoves in order to ensure the economic durability of the project. Carbon revenues are amongst others used for sensitizing end-users and awareness raising, fortify the distribution/supply chain and upscale the project. Improved cookstoves can be purchased and used by everybody within the project boundary willing to participate in the program. There are not expected any direct economic impact or potential risks to the local economy.	At the beginning, the CME will provide fund to cover the operation cost of the VPAs including expenditures beyond the project certification cycle, e.g. Distribution of clean energy products, hygiene campaigns and surveys. After the successful sale of carbon credits generated from the VPAs, the carbon market will provide financial sustainability of the VPAs. The VPAs have positive economic benefit due to less expenditure on firewood for cooking purpose.
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Principle 7.1 Emissions

Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The project will reduce the GHG emissions as it will be monitored and verified in line with the GS4GG.	GHG emissions will be reduced through reducing the use of charcoal for cooking purpose with access to efficient cooking system.
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Principle 7.2 Energy Supply

Will the Project use energy from a local	No	The project does not use energy from a local grid	The VPAs reduce GHG emissions by reducing
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grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?		or power supply. Biomass use (charcoal) will be significantly reduced by introducing highly efficient charcoal stoves.	and replacing the consumption of biomass (Charcoal) for cooking. Thus, VPAs will not require energy supply.
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The project activity will not negatively affect natural or pre-existing pattern of watercourses, ground-water and/or watersheds.	The VPAs involves distribution of ICS in the host countries. Thus, it will not affect the natural or pre-existing pattern of water courses, ground water and/ water shed such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity
Principle 8.2 Erosion and/or Water Body Instability			
a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	a. The project will not cause additional erosion and/or water body instability of or disrupt the natural pattern of erosion. b. Not applicable	The VPAs shall result in reduction in demand of biomass fuel in the region putting less pressure on forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/ felling.
Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products?	No	The Project itself does not involve the use of land and soil for production of crops or other products.	The VPAs involves distribution of ICS in the host countries. Thus, it CMEs not involve the use of land and soil for production of crops or other products

Principle 9.2 Vulnerability to Natural Disaster			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The Project will not be susceptible to or will lead to increased vulnerability to any extreme climatic conditions.	The VPAs involve distribution of ICS in the host countries. It will not lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions
Principle 9.3 Genetic Resources			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	No	The Project is not negatively impacted by the use of genetically modified organisms or GMOs.	The VPAs involve distribution of ICS in the host countries. Thus, it will not be impacted by the GMOs.
Principle 9.4 Release of pollutants			
Could the Project potentially result in the release of pollutants to the environment?	No	The Project does not release any different pollutants to the environment which would not be released in the baseline already. The release of PM and carbon monoxide are significantly reduced by the introduction of efficient cookstoves.	The VPAs involve distribution of ICS in the host countries. Thus, it will lead to reduction in GHG emissions and reduce the release of pollutants.
Principle 9.5 Hazardous and Non-hazardous Waste			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The Project is not involving the manufacture, trade, release, and/or use of hazardous chemicals and or materials.	The VPAs involve distribution of ICS in the host countries. Thus, it will not lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions

Principle 9.6 Pesticide and Fertilizers			
Will the Project involve the application of pesticides and/or fertilisers?	No	The Project doesn't involve the application of pesticides and/or fertilisers.	The VPAs involve distribution of ICS in the host countries. Thus, it will not lead to application of pesticides and/or fertilisers
Principle 9.7 Harvesting of Forests			
Will the Project involve the harvesting of forests?	No	No harvesting of forests is involved.	The VPAs do not involve harvesting of forests. The VPAs shall result in reduction in demand of biomass fuel in the region putting less pressure on forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/ felling.
Principle 9.8 Food			
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The Project doesn't modify the quantity or nutritional quality of food available.	The VPAs involve distribution of ICS in the host countries. Thus, the VPAs will have no impact on the nutritional quality of food available.
Principle 9.9 Animal Husbandry			
Will the Project involve animal husbandry?	No	The Project doesn't involve animal husbandry.	The VPAs involve distribution of ICS in the host countries. It is a Social and Climate Impact Programme. Thus, it VVBs not involve animal husbandry.
Principle 9.10 High Conservation Value Areas and Critical Habitats			
VVBs the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The project is not located in an area within a high conservation value area or within critical natural habitats. Furthermore, the aim of the project is to reduce biomass consumed in the project area for cooking which may save the natural resources.	The VPAs involve distribution of ICS in the host countries. So, there will be no impact on key biodiversity.

Principle 9.11 Endangered Species

a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	No	a. The project boundary is the physical, geographical sites of the distributed cookstoves. There are no endangered species identified as potentially being present the project boundary. b. The distributed cookstoves are not expected to potentially impact other areas where endangered species may be present through transboundary affects.	The VPAs involve distribution of ICS in the host countries. It will be used in the residential areas so no issues with the presence of endangered species into the project boundary.
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D.11.2 Gender Sensitive requirements

Means of validation	Question	Justification provided by CME	VVB Assessment
	Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The project activity doesn't endorse any form of discrimination based on gender. DRC has ratified ILO Convention 111 (Discrimination (employment and occupation) Convention⁶. All inhabitants of DRC may turn to the UN Human Rights Committee, to the "Special Rapporteurs" for violations of specific human rights or to ECOSOC for women's rights violations.⁷ ICS can be purchased and used by any of the women within the project boundary willing to participate in the program. It will therefore not put at risk women's access to or control to efficient cookstoves. It's not foreseen either any reduction or risk related to any other resource, entitlement or benefit. Women/children (being the ones mostly spending time for cooking and fuel procurement) are able to spend less time on cooking/fuel procurement and cook in a much cleaner kitchen environment with less pollutants and dirt, resulting in health benefits and more time for income generating activities and education. The project will help to improve womens' health conditions as reduced combustion and less harmful gases during combustion will reduce indoor air pollution and thereby increase respiratory health of the women and children.	The VPAs are about access to efficient cooking system & The VPAs will abide by the respective national gender strategy. The VPAs include women at every step and do not promote gender disparity in any manner which is verified by the BURN Gender equality and human resource policy/38/. The clean energy products will reduce the time and effort needed by women to fetch firewood and cook for their families. So, the VPAs do not involve and is not complicit in any form of discrimination based on gender difference in line with the National Gender Policy/11/.

⁶ https://www.ilo.org/dyn/normlex/en/?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102981

7 http://www.claiminghumanrights.org/drcongo.html?&L=0		Both women and men were participating in the local stakeholder consultation meeting. A strong focus has been put on women associations and groups when inviting stakeholders to the physical meeting. It is envisaged that women will be at the center of the project developer's marketing, education and distribution chain. It is planned that women in selected communities will demonstrate and educate consumers on the cookstove and its benefits resulting in empowerment, knowledge transfer and generation of jobs for women.	
	Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	The Project is in line with DRC's constitution.⁸ DRC has ratified the principle of equality into its respective constitution (Article 14), which does not tolerate any discrimination concerning women. Article 14 mentions the following "the public powers see to the elimination of any form of discrimination concerning women and assure the protection and the promotion of their rights. They take, in all the domains, notably in the civil, political, economic, social and cultural domains, all the measures appropriate to assure the total realization and full participation of women in the development of the Nation. Women have the right to an equitable representation within the national, provincial and local institutions. The	The VPAs align with the goals of host countries with respect to equal rights and they also align with the National Gender Policy /11/ which eliminates gender disparity.

⁸ <http://extwprlegs1.fao.org/docs/pdf/cng128142.pdf>

		State guarantees the implementation of man-woman parity in these said institutions.”	
	Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	Not applicable, since not necessary.	It has been confirmed from the Stakeholder consultation reports that several women from various categories were invited to attend the stakeholder consultation meeting/26/. The VVB checked the feedback matrix during the desk review and ensured that the CME took their feedback into consideration and there was no gender disparity.
	Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	Not applicable, since not necessary.	It was confirmed from the Stakeholder Consultation report/26/ that members of the women organizations were invited to the meeting and no other expert's opinion was needed.
Findings	No findings.		
Conclusion	The Validation team confirms that the VPAs comply with the GS4GG Gender Equality guidelines and requirements.		

SECTION E. Internal quality control

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

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

SECTION F. Validation opinion

Earthood Services Private Limited (Earthood) has performed a Gold Standard (GS4GG) validation and inclusion of the "GS11433 (VPA 05) & GS11435 (VPA07)". The validation and inclusion were performed on the basis of rules and requirements defined by Gold Standard and UNFCCC, as appropriate.

The review of the PoA-DD, VPA-DDs, supporting documents and subsequent follow-up actions (independent research of information) has provided Earthood with sufficient evidence to determine the fulfilment of stated criteria.

The VPAs will lead to access of clean energy product (ICS) to people of Democratic Republic of Congo (DRC). The project results in reduction of CO₂e emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario and the emission reductions attributable to the project are, hence, additional to any that would occur in the absence of the proposed GS programme of activities.

The emission reductions (average) from the GS11433 (VPA 05) & GS11435 (VPA07) are estimated to be as given in the table below over the crediting period.

SDG Impacts	VPA05	VPA07
SDG13: Climate Action	98,387 tCO ₂ (eq)	541,507 tCO ₂ (eq)
SDG 1: No Poverty	45.20 %	45.20 %
SDG 3: Good Health and well being	98.94%	98.94%
SDG 7: Affordable and Clean Energy	14,390	79,200
SDG 8: Decent Work and Economic Growth	25	25

Over the selected 5 years of renewable crediting period. The emission reduction forecast has been checked, and it is deemed likely that the stated amount is achievable given that the underlying assumptions do not change. The monitoring plan explained in the VPA-DDs is in compliance with the registered PoA DD, Version 4.1. It adequately provides for the ex-post monitoring of the project's emission reductions and sustainable indicators as defined in GS VPA-DDS. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is Earthood's opinion that BURN Manufacturing Co shall be

able to implement the monitoring plan. In summary, "GS11433 (VPA 05) & GS11435 (VPA07)" as described in the VPA-DDs (05 & 07) and, meets all relevant GS requirements and correctly applies the baseline and monitoring methodology TPDDTEC v3.1. Therefore, Earthood requests the inclusion of GS11433 (VPA 05) & GS11435 (VPA07) under the registered PoA "GS10789: ECOA_BURN MULTI-COUNTRY CLEAN COOKING PROGRAMME".

Appendix 1. Abbreviations

Abbreviations	Full Texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DRB	Demonstrably renewable woody biomass
DO	Distribution Organisation
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAO	Food and Agriculture organization
FAR	Forward Action Request
GHG	Greenhouse gas(es)
ICS	Improved Cook Stoves
IPCC	Intergovernmental Panel on Climate Change
LAF	Leakage Adjustment Factor
LSC	Local Stakeholder Consultation
NRB	Non-Renewable Biomass
PA	Project Activity
PoA	Programme of Activities
PoA DD	CDM Programme of Activities Design Document
UID	Unique Identification number
VPA	Voluntary Project Activity
VPA DD	Voluntary Project Activity Design Document
VVB	Designated Operational Entities

Appendix 2.Competence of team members and technical reviewers

Competence Statement			
Name	Arohi Jain		
Education	M. Sc. Environmental Sciences B.Sc. Biology		
Experience	3+ years		
Field	Environmental Sciences		
Approved Roles			
Team Leader	Yes (VM)		
Validator	Yes (VM)		
Verifier	Yes (VM)		
Methodology Expert	Yes (VMR0006, TPDDTEC)		
Local expert	Yes (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria, Quality Manager	Date	10/03/2023
Approved by	Deepika Mahala, Technical Manager	Date	10/03/2023
Competence Statement			
Name	N Premjit Singh		
Education	B.Tech (Mechanical Engineering) M.Tech (Energy Technology) PhD (Mechanical Engineering)		
Experience	9+ Years		
Field	Climate Change, Energy		
Approved Roles			
Team Leader	Yes		
Validator	Yes		
Verifier	Yes		
Methodology Expert	AMS I.D, ACM0002		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES (VM)		
TA Expert (X.X)	YES (TA 1.2, 3.1)		
Reviewed by	Shifali Guleria, Quality Manager	Date	30/09/2022
Approved by	Deepika Mahala, Technical Manager	Date	30/09/2022

Competence Statement			
Name	Shifali Guleria		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	3+ year		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.A., AMS-II.G., AMS-II.E., AMS-III.A.V., AMS-I.D, ACM0002)		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (1.2, 3.1)		
Reviewed by	Deepika Mahala	Date	16/02/2022
Approved by	Ashok Gautam	Date	18/02/2022

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	9 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.A.V., AMS.III.BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1)		
Reviewed by	Shifali Guleria	Date	21/12/2022
Approved by	Deepika Mahala	Date	21/12/2022

Competence Statement			
Name	Emmanuel Kasiho		
Education	Master's in business administration B.Sc. Civil Engineering		
Experience	3+ years		
Field	Civil Engineering		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (Democratic Republic of Congo)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria (Quality Manager)	Date	26/07/2022
Approved by	Deepika Mahala (Technical Manager)	Date	26/07/2022

Appendix 3. Documents reviewed or referenced

S.No.	Author	Title	References to the document	Provider
1.	GS4GG	Principles and requirements for GS4GG	Version 1.2 Dated Oct 2019	Others
2.	GS4GG	Gold Standard Programme of Activities Requirements	Version 2.0	Others
3.	GS4GG	Community Services Activity Requirements	Version 1.2 Dated Oct 2019	Others
4.	BURN Manufacturing Co.	PoA-DD	Version 4.1 dated 13/10/2021	CME
5.	Gold standard	TPDDTEC V3.1 for ICS	Version 3.1	Others
6.	BURN Manufacturing Co.	fNRB calculation sheets	-	CME
7.	UNFCCC	Standard: CDM VVS PoA	Version 3.0	Others
8.	GS4GG	GHG Product Requirements	Version 2.0	
9.	BURN Manufacturing Co.	VPA-DDs GS11433 (VPA 05) and GS11435 (VPA7)	VPA05- v2.6 dated 13/06/2023 & VPA07- v2.6 dated 13/06/2023	CME
10.	GS4GG	GS4GG VPA-DD Template	Version 2.0	Others
11.	LDCs	National Gender Policy	2011	Others
12.	GS4GG	GS4GG Covid-19 Interim Measures	Version 3.0	Others
13.	UNFCCC	Guideline for Sampling and surveys for CDM project Activities	Version: 4.0	CME
14.	UNFCCC	Standard: CDM PS for PoA	Version 3.0	Others
15.	BURN Manufacturing Co.	EcoMobile ⁹ or KoboCollect ¹⁰ (Screenshot of 1st Stove registered)	-	Others
16.	UNFCCC	Standard for Sampling and surveys for CDM project Activities	Version: 09.0	Others

⁹ <https://echomobile.io/>

¹⁰ <https://www.kobotoolbox.org/>

17.	BURN Manufacturing Co.	VVB remote survey	Dated: 26/07/2022	CME
18.	BURN Manufacturing Co.	Carbon transfer agreement between and end-users (Carbon Waiver sticker & strap on ICS box)	-	CME
19.	FAO	Global Forest Resources Assessment 2020	2020	Others
20.	IPCC	-2006 IPCC default values -IPCC 2006 Guidelines for National Greenhouse gas Inventories	2006	Others
21.	Carbon check	PoA Validation report, v4.0	23/09/2021	Others
22.	BURN Manufacturing Co.	Addendum between BURN Manufacturing Co. & partner organisation (Altech Group)	02/02/2022	CME
23.	UN	UN Convention against corruption	2003	Others
24.	BURN Manufacturing Co.	-Declaration showing this project is implemented independently (VPA Inclusion Letter BURN) dated 20/06/2022. -ODA Declaration GS11433, dated 02/11/2021 -ODA Declaration GS11435, dated 10/07/2022	-	CME
25.	BURN Manufacturing Co.	Distribution database (Sheet of DRC Database Technology Days and Stoves)	-	Others
26.	BURN Manufacturing Co.	-Stakeholder Consultation Report (Version 2.0, Dated 15/02/2022) -DRC SFR Email Invitation -DRC LSC Email Invitation	-	Others
27.	Gold Standard	GHG emissions reductions sequestration and product requirements	Version 2.0 Dated April 2021	Others
28.	BURN Manufacturing Co.	SDG outcome sheet/ER sheet	Corresponding to the VPA-DDs	CME
29.	BURN Manufacturing Co.	Data recording sheet for baseline survey	Corresponding to the VPA-DDs	CME
30.	BURN Manufacturing Co.	Baseline survey Forms (Analysis sheet)	Several	CME
31.	ESPL	VVB Remote survey checklist	26/07/2022	Others
32.	UNFCCC	Guidelines for sampling and surveys for CDM project activities and programmes of	Version 4.0	

		activities		
33.	BURN Manufacturing Co.	Manufacturer's specifications of ICS	-	CME
34.	BURN Manufacturing Co.	Data recording sheet for Project KPT survey	-	CME
35.	GS4GG	Applicability of global warming potential for gold standard for the global goals projects	-	CME
36.	BURN Manufacturing Co.	WBT test report of ICS at DRC	-	CME
37.	UN	UN Declaration on the rights of indigenous people	2001	CME
38.	BURN Manufacturing Co.	Gender equality and human resource policy	-	CME
39.	International Labour Organization: Ratifications for LDCs	https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103500/	Last accessed: 20/09/2022	CME
40.	USAID	Link: https://www.usaid.gov/w hat-we-do/global- health/cross-cutting- areas/demographic-and- health-surveys- program/	Last accessed: 20/09/2022	Others
41.	Various	https://dhsprogram.com/ https://www.climatepolicyinitiative.org/publication/energizing-finance-understanding-the-landscape-2021/#:~:text=The%20Energizing%20Finance%3A%20Understanding%20the,energy%20access%3A%20electrification%20and%20clean/ https://cleancooking.org/news/02-26-2018-partner-spotlight-un-women-drc / https://www.cleancookingalliance.org/resources/32.html (Page no.21 of "The energy access to situation in developing countries, WHO, 2009")	-	Others

		https://dhsprogram.com/pubs/pdf/FR344/FR344.pdf		
42.	UNFCCC	CDM Tool 30 "Tool 30 "Calculation of the fraction of Non-renewable Biomass	Version 3.0	Others
43.	UN	UN Declaration on the rights of Indigenous people	2001	Others
44.	Gold Standard	Deviation request form (DEV_284)	09/08/2022	Others
45.	BURN Manufacturing Co.	ICS test reports by (KIRDI Stove Testing Centre)	13/10/2020	CME
46.	Various	Ministry of environment, nature protection, and tourism, on basic principles relating to the protection of the environment https://medd.gouv.cd/	-	Others
47.	Various	WISDOM REPORT	-	Others
48.	C4 Eco Solution (Pty) Ltd	DRC_fNRB Report_v1.2_19 January 2023_CONFIDENTIAL	-	Others
49.	C4 Eco Solution (Pty) Ltd	DRC_fNRB Calculation Sheet_v1.3_CONFIDENTIAL	-	Others
50.	BURN Manufacturing Co.	10MAR2023 GS11433 DRC VPA 05_BS bKPT_CONFIDENTIAL	-	Others
51.	Gold Standards	Deviation Request form (DEV_385)	10/04/2023	Others
52.	BURN	13JUNE2023 GS 11433_ER calculation_10789-VPA5 DRC_v3.0	13/06/2023	CME

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

- A corrective action request (CAR) is raised if one of the following situations occurs:
 - The PD have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional GHG emission reductions or net anthropogenic GHG removals;
 - The applicable rules and requirements have not been met;
 - There is a risk that GHG emission reductions or net anthropogenic GHG removals cannot be monitored or calculated.
- A clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable rules and requirements have been met.
- A forward action request (FAR) during validation to identify issues related to project implementation that require review during the first verification of the project activity.

Findings for Improved cookstove (VPA-05)

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

FAR ID	01	Section no.	-	Date : 04/04/2023
Description of FAR				
The Stakeholder consultation report shall be submitted to Gold Standard within three months of the event (though this date may be after the Project Start Date). The GS VVB shall confirm how the project meets requirement 4.1.35 of the GS Principles and Requirements.				
CME response				Date : 05/04/2023
PD has submitted the LSC report and support documents to the VVB for review. The LSC report was not submitted 3 months after the meeting to SustainCERT however, all the requirements for the LSC meeting in terms of participants, discussions and all other requirements have been as per the Gold standard LSC requirements.				
Documentation provided by CME				
Local Stakeholder Consultation Report				
VVB assessment				Date: 10/04/2023

The Stakeholder Consultation Report for the project has been submitted by the PD. The LSC was done on 13 and 14 August 2020 and the upload on SC app was done on 3 November 2021. This was not in compliance with requirement 4.1.35 of the GS Principles and Requirements. The PD had submitted a deviation to SC (DEV_385) dated 10/04/2023 in view of same. The deviation states that VPA 5 is currently undergoing combined design and performance review, while VPA 7 only design review and the CME would not have enough time to additional consultations at this point given the urgency with issuance of GS-VERs. The VVB has assessed the report along with the approved deviation and found them to be OK.

FAR ID	02	Section no.	-	Date : 04/04/2023
Description of FAR				
The operational lifetime shall be justified with relevant evidence (e.g. the stoves lifetime), which shall also be checked at the time of validation by GS VVB.				
CME response				Date : 05/04/2023
As per manufacturer specification the life of the stove can be anywhere between 7-10 years and any attrition happening during the life of the project shall be accounted during annual usage surveys. Further, the lifetime of the stoves may go beyond the indicated lifetime. Hence, depending on the usage rate of the stoves, stoves will be either removed from the database after the end of its lifetime and not credited anymore or remain in the database for crediting until the moment a significant drop in usage rate is observed during the annual surveys.				
Documentation provided by CME				
Manufacturer specifications				
VVB assessment				Date: 10/04/2023
The operational lifetime of cookstove is based on the submitted manufacturer's declaration document which states that the lifetime is between 7-10 years. It has provided in a range and attrition on the life between 7-10 years or beyond of the stove can be checked and verified through the annual usage surveys. This was also confirmed during the remote audit while interviewing the PP's representatives that at the end of 7 years, based on the usage surveys results, stoves will be either removed from the database after the end of its lifetime and not credited anymore or remain in the database for crediting. Therefore, FAR 02 is closed.				

FAR ID	03	Section no.	-	Date : 17/04/2023
Description of FAR				
The PD conducts, as proposed, an additional stakeholder consultation before the 2 nd verification process for VPA 11433 (VP5) and before the 1 st verification process for VPA 11435 (VP7) are closed; and addresses all Stakeholder comments. The verifying VVB shall include information regarding the compliance with this request in its corresponding Verification Report.				
CME response				Date : DD/MM/YYYY
NA				

Documentation provided by CME	
NA	
VVB assessment	Date: 17/04/2023
The FAR remains open and has to be addressed before the closure of 2 nd verification process for VPA 05 and 1 st verification process closure for VPA 07.	

Table 2. CAR from this validation

CAR ID	01	Section no.	B.3	Date : 29/07/2022
Description of CAR				
1. CME is requested to provide summary about the project boundary for VPA 5 with reference to PoA DD v4.1 dated 13.10.2021. 2. In the table, under Heat delivery section of Baseline scenario it is not mentioned against N₂O whether it is included or not.				
CME response				Date : 03/08/2022
1. Project boundary summary provided in the revised VPA-DD 2. The table in section B3 has been updated in revised VPA-DD				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has revised the following: • Project boundary of VPA 05 under section B.3 is updated as per referenced PoA DD v4.1 dated 13.10.2021 • Table in section B.3 Hence, CAR 01 is closed.				

CAR ID	02	Section no.	B.6	Date : 29/07/2022
Description of CAR				
A statement in section B.6 of VPA DD, 'Sustainable Development Goals (SDG) outcomes' states, "Relevant Target/ Indicator for each of the three SDGs". However, the SDGs targeted under this VPA are five. CME is requested to kindly revise the SDGs inline with section A.4 of PoA DD v4.1 dated 13.10.2021.				
CME response				Date : 03/08/2022
The statement has been corrected and the section is in line with section A.4 of the PoA DD.				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has revised the 'Sustainable Development Goals (SDG) outcomes' under section B.6 of VPA-DD. VVB found the changes in the VPA DD to be appropriate in accordance with section A.4 of PoA DD v4.1 dated 13.10.2021. Hence, CAR 02 is closed.				

CAR ID	03	Section no.	B.6.1 & B.6.3	Date : 29/07/2022
Description of CAR				
Under section B.6.1 and B.6.3 CME has provided the equations for emission reduction as screenshots. Requesting to kindly revise and provide as text format for better clarity to any third-party reader.				

CME response	Date : 03/08/2022
The equations have now been provided as texts in the revised VPA-DD	
Documentation provided by CME	
Revised VPA-DD	
VVB assessment	Date: 12/08/2022
Equation for emission reduction under section B.6.1 & B.6.3 is revised in the VPA DD and are found to be inline with the applied methodology TPDDTEC v3.1. Hence, CAR 03 is closed.	

CAR ID	04	Section no.	B.6.4	Date : 29/07/2022
Description of CAR				
Under section B.6.4, the title and description of SDG for the first table is not provided. Correction is requested.				
CME response				Date : 03/08/2022
The title and description has been added to the first table under section B.6.4				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has updated the title and description of SDG under section B.6.4 for Table 1 and VVB found the changes to be appropriate. Hence, CAR 04 is closed.				

CAR ID	05	Section no.	B.7.1	Date : 29/07/2022
Description of CAR				
The parameter for the 'Efficiency of the ICS of each type i being deployed as part of the project activity' is denoted as ' $\eta_{new,\$}$ ' however as per the applied methodology it is denoted as ' $\eta_{new,i}$ '. Kindly clarify.				
CME response				Date : 03/08/2022
The data/parameter has now been corrected in section B.7.1 of the revised VPA-DD				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has updated the parameter for the 'Efficiency of the ICS of each type "i" being deployed as part of the project activity' as ' $\eta_{new,i}$ ' under section B.7.1 and changes are inline to the registered PoA DD v4.1 dated 13.10.2021. Therefore CAR #05 is closed.				

CAR ID	06	Section no.	-	Date : 29/07/2022
Description of CAR				
VVB observed, supporting references mentioned as evidence in the VPA DD are found to be inconsistent (no proper sequence of serial numbers) and the referencing is not provided in the footnotes. CME is requested to review and revise the same.				
CME response				Date : 03/08/2022
The numbering of the footnotes has been revised and non-relevant have been removed.				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has updated the numbering sequence and referencing in the footnotes in the revised VPA-DD and VVB found the changes to be appropriate. Therefore CAR #06 is closed.				

CAR ID	07	Section no.	ER Calc Sheet v1.0	Date : 02/09/2022
Description of CAR				
The following have been observed by the VVB: - In the worksheet 'Baseline and Project Emissions', PD is requested to update Row 23 as the details of Baseline Emissions are mentioned under Project Emissions. - In the worksheet 'Th. Energy savings unit level', Row 17 should be consistent with Para 4.1.9 (b) of Community Services Activity Requirements. PD is requested to review and revise.				
CME response				Date : 08/09/2022
- Row 23 has been corrected to 'Project' emissions - The energy savings threshold has been corrected to 600 MWh to make it consistent with the para 4.1.9 of the CSA Requirements				
Documentation provided by CME				
VVB assessment				Date: 13/09/2022
VVB has assessed the updated rows in worksheets 'Baseline and Project Emissions' and 'Th. Energy savings unit level' in the updated document 04082022.GS 11433_ER calculation_10789-VPA5 DRC_v1.0 and found them to be OK. Hence, CAR #07 is closed.				

CAR ID	08	Section no.	A.1	Date : 02/09/2022
Description of CAR				
In the VPA DD v2.1, section A.1 the reference for the technical specifications of the cookstoves is found to be inappropriate. CME is requested to update the same accordingly.				
CME response				Date : 08/09/2022
The reference to technical specifications has been changed to Section A.3. of the VPA-DD				

Documentation provided by CME	
VVB assessment	Date: 13/09/2022
VVB has assessed the updated VPA DD and found that the statement ' <i>For a more detailed technical description of the ICS see section A.5 of this document.</i> ' has not been updated yet. CME is requested to review and revise the same. Hence, CAR #08 is open.	
CME response	Date : 16/09/2022
The statement has been revised along with other reference errors in the revised VPA-DD	
Documentation provided by CME	
Revised VPA-DD	
VVB assessment	Date: 25/09/2022
The updated quoted statement and related references for the technical specifications of ICS have been cross checked by the VVB and found to be OK. Hence, CAR 08 is closed.	

CAR ID	09	Section no.	A.3	Date : 02/09/2022
Description of CAR				
VVB has cross-checked the technical specifications of the cookstoves with the details provided in the supporting document ' <i>02AUG2022 - Jikokoa BURN Manufacturer Specs</i> ' and found them to be inconsistent. CME is requested to kindly update the technical specifications of the cookstoves in accordance with the supporting document provided.				
CME response				Date : 08/09/2022
The technical specifications provided in Section A.3. of the VPA-DD has been corrected.				
Documentation provided by CME				
VVB assessment				Date: 13/09/2022

VVB has observed the following:

- For stoves 'Jikokoa G3.5' and 'Jikokoa Xtra (G4)' the values of parameters under WBT Results are found to be inconsistent with the values mentioned in document '02AUG2022 - Jikokoa BURN Manufacturer Specs'.
 - For 'Jikokoa G3.5' stoves, the following values have been observed:

The VPA DD states the following values for WBT Results:

High power thermal efficiency (average of cold start and hot start)	48.1%
Firepower	1.99
Boil Time	27.59

The Manufacturer Specifications state the WBT Results as follows:

High power thermal efficiency (average of cold start and hot start)	53.7%
Firepower	2.05
Boil Time	27.72

- For 'Jikokoa Xtra (G4)' stoves, the following values have been observed:
The VPA DD states the following values for WBT Results:

High power thermal efficiency (average of cold start and hot start)	44.6%
Firepower	2.36
Boil Time	26.44

The Manufacturer Specifications state the WBT Results as follows:

High power thermal efficiency (average of cold start and hot start)	44.1%
Firepower	2.4
Boil Time	24

- For stove 'Ecoa Char MMJ' the units of the packaging dimensions mentioned in updated VPA DD are inconsistent with the ones mentioned in document '02AUG2022 - Jikokoa BURN Manufacturer Specs'.
CME is requested to review and revise the same.

Hence, CAR #09 is open.

CME response	Date : 16/09/2022
Revised VPA-DD and tech specs are provided to ensure consistency.	
Documentation provided by CME	
VVB assessment	Date: 25/09/2022
CME has updated the manufacturer specifications of the ICS in VPA DD which are now inline with '1AUG2022 Manufacturers Specifications BURN Jikokoa Stoves' document and the updated MR for first verification.	
Hence, CAR 09 is closed.	

Table 3. CL from this validation

CL ID	01	Section no.	-	Date : 29/07/2022
Description of CL				
CME is requested to provide the following documents:				
1. Evidence of project start date 2. Stove Efficiency Test Report 3. KML file for the VPA project boundary 4. Documents supporting technical specifications of ICS (also any third-party verified document) 5. Manufacturer's declarations for lifetime of ICS 6. Evidence to substantiate unique serial number (USN) of the Improved charcoal cookstove(s) 7. Photograph of ICS, written messages on the stove packaging (strip and/or sticker on the box) and warranty booklet for confirmation of carbon rights transfer to CME 8. Project Database including distribution/ sales records of the ICS 9. f_{NRB} Report for project boundary of VPA. 10. Local stakeholder Consultation Documents 11. Evidence to substantiate SDG 1, 3, 7 & 8. 12. Declaration from the CME that the project has not or shall not claim carbon credits any other scheme after Registration of the project under GS4GG. 13. Undertaking stating that the CME is the sole owner of the ERs generated from the project stove, provided by the local distributor(s)				
CME response				Date : 03/08/2022
All the requested documents have been provided to the VVB				
Documentation provided by CME				
VVB assessment				Date: 02/09/2022
The status of the documents submitted by the CME is as follows:				
Submitted			Pending	Not Mandatory
Document number 1,2,4,5,6,7,8,9,10,13			Document number 12	Document number 3,11,12,15
CME is requested to provide documents number 12.				
CL #01 is open				
CME response				Date : 08/09/2022
The requested documents have been provided to the VVB.				

Documentation provided by CME			
A Declaration that the project has not or shall not claim carbon credits under any other scheme after Registration of the project under GS4GG.			
VVB assessment			Date: 25/09/2022
All the requested documents have been submitted by the CME. Hence, CL 01 is closed.			

CL ID	02	Section no.	A.1	Date : 29/07/2022
Description of CL				
In accordance with section A.1 of VPA DD, "BURN collaborates with various local partners on the ground to assist in the different activities of this cookstove project." PD is requested to kindly clarify about all the partners who are involved in the implementation of VPA 11433 in DRC with supporting evidences.				
CME response				Date : 03/08/2022
The statement has been corrected in the revised VPA-DD as BURN doesn't collaborate with any local partner but handle everything through their teams.				
Documentation provided by CME				
VVB assessment				Date: 12/08/2022
In accordance with the revised VPA-DD v2.1 dated 03/08/2022, "BURN has not collaborated with any local partner" for the ground assistance in the cookstove project. However, section B.4 states "Three staff members of Altech, BURN's main distributor in DRC, have been trained by the carbon consultant mkaarbon safari". Similarly, under section E.2, end users and stakeholders can reach out to 'Altech Group Head Office' at Kinshasa, DRC for any queries related to the project and the same has been conveyed by end-users and stakeholders during the RSV conducted by VVB on 26/07/2022. CME is requested to clarify the role of 'Altech Group' in the project with reference to the changes done in the section A.1 of the revised VPA-DD v2.1 dated 03/08/2022. Hence, CL #02 is open.				
CME response				Date : 18/08/2022
Altech is BURN's implementing partner for this VPA. The stoves are distributed in DRC by BURN through Altech.				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 02/09/2022
With reference to the document provided by the PD 'Altech Group BURN addendum-signed February 2022 _CLAUSE 22_highli', 'BURN MANUFACTURING USA LLC' has signed 'DEED OF VARIATION' with 'ALTECH GROUP' according to which BURN, the manufacturer and distributor of various energy saving stoves in Kenya will be selling its stoves to ALTECH GROUP which is a local distributor of clean, affordable energy in DRC. CME is requested to elaborate the same information in section A.1 of VPA DD. Hence, CL #02 is open.				
CME response				Date : 08/09/2022
Information on Altech Group has been added in the VPA-DD Section A.1.				
Documentation provided by CME				

VVB assessment	Date: 13/09/2022
In accordance with 'DEED OF VARIATION' submitted, CME has updated 'BURN implements the stoves in this VPA through Altech Group, which acts as the distribution partner for BURN' in VPA DD. Hence, CL #02 is closed.	

CL ID	03	Section no.	B.6.1	Date : 29/07/2022
Description of CL				
Under section B.6.1 states, "The other SDGs impacts of this VPA (SDG 1, SDG 3, SDG 7 and SDG 8) will not be certified as "Certified SDG Impacts" and, therefore, for these impacts no specific methodologies for monitoring and estimation will be used." Clarification is requested.				
CME response				Date : 03/08/2022
The statement has been removed from the VPA-DD since CME is showing monitoring of 5 SDG parameters				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has revised the section B.6.1 as the SDG impacts of SDG 1, SDG 3, SDG 7 and SDG 8 will be monitored to achieve the SDGs targeted as "Certified SDG Impacts". VVB found the changes in the VPA-DD v2.1 to be appropriate and same has been updated in the ER calculation sheet. Therefore, CL #03 is closed.				

CL ID	04	Section no.	B.6.2	Date : 29/07/2022
Description of CAR				
Under section B.6.2, Data and parameters fixed ex-ante, the CME is requested to clarify why the following parameters have not been considered: 1) $EF_{ch,prod,CO_2}$ (CO ₂ emission factor arising from production of charcoal) 2) $EF_{ch,prod,non-CO_2}$ (Non-CO ₂ emission factor arising from production of charcoal)				
CME response				Date : 03/08/2022
The parameter tables have been added to section B.6.2				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 12/08/2022
CME has updated section B.6.2 'Data and Parameters fixed ex-ante' in accordance with the methodology guidelines applied for ER calculations for the project. VVB has verified the section B.6.2 and found it to be consistent. Therefore CL #04 is closed.				

CL ID	05	Section no.	B.6.4	Date : 29/07/2022
Description of CL				

In Section B.6.4,

SDG 01

- The net benefit of households achieve monetary savings is around 45.30% and project estimate is 54.70%. However, as per reference footnote no.15. it states "*In the project activity, households spend 50% for charcoal instead of 100% in the baseline scenario. This results in charcoal savings of 50%*". CME is requested to clarify the difference in project estimate value against SDG 01.

SDG 07

- With reference to SDG 07, the expected number of ICS usage by the end of 1st crediting period will be 18,000 i.e., as per the usage rate of 90% of estimated ICS of 20,000 (yr-stoves). However, as per footnote reference no.17, the expected number of ICS usage will be " $15,000 \times 90\% = 13,500$ ". CME is requested to clarify.

CME response

Date : 03/08/2022

The footnote has been corrected to reflect usage survey results on monetary savings

Documentation provided by CME

Revised VPA-DD

VVB assessment

Date: 12/08/2022

Under section B.6.4,

- CME has revised the tables of SDG 01 & 07 and same have been updated in the revised ER calculation sheet.
 - Footnote referring to SDG 01 has been updated inline to the SDG 01 table. However, footnote related to SDG 07 is missing. CME is requested to provide a reference footnote for SDG 07.
- Hence, CL #05 is open.

CME response

Date : 03/08/2022

Please note that this information has been added above the table, instead of footnote.

Documentation provided by CME

VVB assessment

Date: 02/09/2022

The description of the footnote has been updated by the CME in the description for SDG 7 above the table. The same has been cross checked and verified by the VVB.

Hence, CL #05 is closed.

CL ID	06	Section no.	C.1.1 & C.2.1	Date : 29/07/2022
Description of CL				
VVB observed the Project Crediting Period to be 24/12/2020 in section C.2.1 and Project Start date to be 23/12/2020 in VPA DD section C.1.1. PD is requested to clarify that why the project start date and crediting period start date are not same.				
CME response				Date : 03/08/2022
A lag of 1 day is considered from the start date (installation) of the ICS to account for installation happening in any time of the start date day.				
Documentation provided by CME				
-				
VVB assessment				Date: 12/08/2022

In accordance with CME's response, the start date of VPA will be 01/08/2022 and start date of crediting period of VPA-07 will be 02/08/2022. A lag of 1 day is considered in start date of crediting period from the start date of the ICS installation. Therefore, the credits would be claimed from 02/08/2022.
Therefore, CL #06 is closed.

CL ID	07	Section no.	ER Sheet	Date : 29/07/2022
Description of CAR				
File Name: gs11433_ER calculation BURN GS ECOA PoA_VPA5 DRC_v1.0				
1. In Accordance with above Excel sheet VVB observed, the ER Sheet does not mention the base calculations for SDG 1, SDG 3, SDG 7 and SDG 8 which are targeted under VPA05. CME is requested to clarify the SDG targets with reference to section B.6.4 of VPA DD. 2. Under sheet "ER ICS TPDDTEC", the units for $EF_{b,wood,CO2(combined)}$ and $EF_{b,wood,nonCO2(combined)}$ are mentioned as tCO₂e/t charcoal. CME is requested to clarify.				
CME response				Date : 03/08/2022
1. A revised ER sheet including the SDG calculation tab has been provided to VVB 2. The unit has been revised to tCO₂e/twood				
Documentation provided by CME				
Revised ER calculation sheet				
VVB assessment				Date: 12/08/2022
In accordance with revised ER calculation sheet v2.0, the following changes are being verified by the VVB and found to be in line with the VPA-DD v2.1. • CME has added SDG worksheet in the ER calculation sheet. 'Emission Reduction' worksheet provides the ERs calculation for SDG 13 and 'SDG worksheet' demonstrates SDG 1, SDG 3, SDG 7 and SDG 8. SDG targets and their estimated values given in ER sheet are consistent with the VPA-DD v2.1. • Under sheet "ER ICS TPDDTEC", the units for $EF_{b,wood,CO2 (combined)}$ and $EF_{b,wood,nonCO2 (combined)}$ have been updated to tCO₂e/t wood. Therefore, CL #07 is closed.				

CL ID	08	Section no.	Baseline KPT Survey	Date : 12/08/2022
Description of CL				
File Name: BURN GS PoA_10789__DRC_Baseline KPT Surveys v1.1-Jiko				
With reference to the above mentioned excel spread sheet, under the sheet "Baseline Survey_KPT", the total no. of samples surveyed by CME for baseline KPT survey are 201. VVB observed that the households also use wood and LPG as fuel for cooking, however, the ER calculation considers only charcoal as the baseline fuel. Kindly clarify.				
CME response				Date : 17/08/2022
The amount of LPG that was observed was negligible and to that end, the CME has not considered LPG in baseline emissions as a measure of conservativeness.				
Documentation provided by CME				

VVB assessment	Date: 02/09/2022
Based on the review of ER Calculation sheet, the validation team confirms that the amount of LPG and wood fuel used in baseline is negligible. As a result, CME is only claiming carbon credits from replacement of woody biomass consumption (charcoal) following methodology. Furthermore, CME has applied most conservative approach and not claiming carbon credits from fuelwood or LPG. Hence, CL #08 is closed.	

CL ID	09	Section no.	ER Calc Sheet	Date : 02/09/2022
Description of CL				
In Accordance with the ER sheet: 04082022.GS 11433_ER calculation_10789-VPA5 DRC_v1.0. Under the tab "ER ICS TPDDTEC" cell no. D12, the value considered for project fuel consumption is 0.593 t/hh/y as per assumption of 50% fuel savings from baseline fuel in use. The value assumed in cell D12 is punched in value. CME shall elaborate how this assumption of 50% fuel savings from baseline fuel is in use and is arrived at, under the relevant section of the VPA-DD.				
CME response				Date : 16/09/2022
The value for project fuel consumption has been taken from project KPT conducted for performance review which is being simultaneously done for the project. The value has been revised in cell D12 of tab "ER ICS TPDDTEC" of ER calculation sheet.				
Documentation provided by CME				
Revised ER calculation sheet and VPA-DD				
VVB assessment				Date: 25/09/2022
The updated value for 'Project fuel consumption' parameter in cell D12 of 'ER ICS TPDDTEC' worksheet has been cross checked by the VVB with project KPT survey results and found it to be inline. Hence, CL 09 is closed.				

Table 4. FAR from this validation

FAR ID	01	Section No.	-	Date : 17/04/2023
Description of FAR				
The PD conducts, as proposed, an additional stakeholder consultation before the 2nd verification process for VPA 11433 (VP5) and before the 1st verification process for VPA 11435 (VP7) are closed; and addresses all Stakeholder comments. The verifying VVB shall include information regarding the compliance with this request in its corresponding Verification Report.				
CME response				Date : DD/MM/YYYY
Documentation provided by CME				
VVB assessment				Date: DD/MM/YYYY

Findings for Improved cookstove (VPA-07)

Table 1. FAR from validation and/or previous verification

FAR ID	01	Section no.	-	Date : 04/04/2023
Description of FAR				
The Stakeholder consultation report shall be submitted to Gold Standard within three months of the event (though this date may be after the Project Start Date). The GS VVB shall confirm how the project meets requirement 4.1.35 of the GS Principles and Requirements.				
CME response				Date : 05/04/2023
PD has submitted the LSC report and support documents to the VVB for review. The LSC report was not submitted 3 months after the meeting to SustainCERT however, all the requirements for the LSC meeting in terms of participants, discussions and all other requirements have been as per the Gold standard LSC requirements.				
Documentation provided by CME				
Local Stakeholder Consultation Report				
VVB assessment				Date: 10/04/2023
The Stakeholder Consultation Report for the project has been submitted by the PD. The LSC was done on 13 and 14 August 2020 and the upload on SC app was done on 3 November 2021. This was not in compliance with requirement 4.1.35 of the GS Principles and Requirements. The PD had submitted a deviation to SC (DEV_385) dated 10/04/2023 in view of same. The deviation states that VPA 5 is currently undergoing combined design and performance review, while VPA 7 only design review and the CME would not have enough time to additional consultations at this point given the urgency with issuance of GS-VERs. The VVB has assessed the report along with the approved deviation and found them to be OK.				

FAR ID	02	Section no.	-	Date : 04/04/2023
Description of FAR				
The operational lifetime shall be justified with relevant evidence (e.g. the stoves lifetime), which shall also be checked at the time of validation by GS VVB.				
CME response				Date : 05/04/2023
As per manufacturer specification the life of the stove can be anywhere between 7-10 years and any attrition happening during the life of the project shall be accounted during annual usage surveys. Further, the lifetime of the stoves may go beyond the indicated lifetime. Hence, depending on the usage rate of the stoves, stoves will be either removed from the database after the end of its lifetime and not credited anymore or remain in the database for crediting until the moment a significant drop in usage rate is observed during the annual surveys.				
Documentation provided by CME				
Manufacturer specifications				
VVB assessment				Date: 10/04/2023

The operational lifetime of cookstove is based on the submitted manufacturer's declaration document which states that the lifetime is between 7-10 years. It has provided in a range and attrition on the life between 7-10 years or beyond of the stove can be checked and verified through the annual usage surveys. This was also confirmed during the remote audit while interviewing the PP's representatives that at the end of 7 years, based on the usage surveys results, stoves will be either removed from the database after the end of its lifetime and not credited anymore or remain in the database for crediting.

Therefore, FAR 02 is closed.

FAR ID	03	Section no.	-	Date : 17/04/2023
Description of FAR				
The PD conducts, as proposed, an additional stakeholder consultation before the 2 nd verification process for VPA 11433 (VP5) and before the 1 st verification process for VPA 11435 (VP7) are closed; and addresses all Stakeholder comments. The verifying VVB shall include information regarding the compliance with this request in its corresponding Verification Report.				
CME response				Date : DD/MM/YYYY
NA				
Documentation provided by CME				
NA				
VVB assessment				Date: 17/04/2023
The FAR remains open and has to be addressed before the closure of 2 nd verification process for VPA 05 and 1 st verification process closure for VPA 07.				

Table 2. CAR from this validation

CAR ID	01	Section no.	B.3	Date : 29/07/2022
Description of CAR				
Under Section B.3, CME is requested to provide a summary about the project boundary for VPA 07 with reference to PoA DD v4.1 dated 13.10.2021.				
CME response				Date : 03/08/2022
3. Project boundary summary provided in the revised VPA-DD				
Documentation provided by CME				
<i>Revised VPA-DD</i>				
VVB assessment				Date: 05/09/2022
CME has summarized the project boundary of VPA-07 under section B.3, inline to the reference PoA DD v4.1 dated 13.10.2021. Therefore CAR #01 is closed.				

CAR ID	02	Section no.	B.6	Date : 29/07/2022
Description of CAR				
A statement in section B.6 of VPA DD, 'Sustainable Development Goals (SDG) outcomes' states, " <i>Relevant Target/ Indicator for each of the three SDGs</i> ". However, the SDGs targeted under this VPA are five.				
CME is requested to kindly revise the SDGs inline with section A.4 of PoA DD v4.1 dated 13.10.2021.				
CME response				Date : DD/MM/YYYY

The statement has been corrected and the section is in line with section A.4 of the PoA DD.	
Documentation provided by CME	
Revised VPA-DD	
VVB assessment	Date: 05/09/2022
CME has revised the 'Sustainable Development Goals (SDG) outcomes' under section B.6 of VPA-DD. VVB found the changes in the VPA -DD to be appropriate as per section A.4 of PoA DD v4.1 dated 13.10.2021.	
Therefore CAR #02 is closed.	

CAR ID	03	Section no.	B.6.1 & B.6.3	Date : 29/07/2022
Description of CAR				
Under B.6.1 & B.6.3, CME has provided the equation for emission reduction as screenshots. Requesting to kindly revise and provide as text format for better clarity to any third party reader.				
CME response				Date : 03/08/2022
The equations have now been provided as texts in the revised VPA-DD				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 05/09/2022
Equation for emission reduction under section B.6.1 & B.6.3 is revised in the VPA-DD. VVB cross checked the Equation for emission reduction calculation and found it to be inline with the applied methodology TPDDTEC v3.1.				
Therefore CAR #03 is closed.				

CAR ID	04	Section no.	B.6.4	Date : 29/07/2022
Description of CAR				
Under section B.6.4, the title and description of SDG for the first table is not provided. Correction is requested.				
CME response				Date : 03/08/2022
The title and description has been added to the first table under section B.6.4				
Documentation provided by CME				
Revised VPA-DD				
VVB assessment				Date: 05/09/2022
CME has added the title and description of SDG under section B.6.4 for Table 01 and VVB found the changes to be appropriate.				
Therefore CAR #04 is closed.				

CAR ID	05	Section no.	B.7.1	Date : 29/07/2022
Description of CAR				

The parameter for the 'Efficiency of the ICS of each type "i" being deployed as part of the project activity' is denoted as ' $\eta_{new,\$}$ ' however as per the methodology it is denoted as ' $\eta_{new,i}$ '. Kindly clarify.

CME response **Date :** 03/08/2022

The data/parameter has now been corrected in section B.7.1 of the revised VPA-DD

Documentation provided by CME

Revised VPA-DD

VVB assessment **Date:** 05/09/2022

CME has updated the parameter for the 'Efficiency of the ICS of each type "i" being deployed as part of the project activity' as ' $\eta_{new,i}$ ' under section B.7.1 and changes are inline to the registered PoA DD v4.1 dated 13.10.2021.

Therefore CAR #05 is closed.

CAR ID 06 **Section no.** - **Date :** 29/07/2022

Description of CAR

VVB observed, supporting references mentioned as evidence in the VPA DD are found to be inconsistent (no proper sequence of serial numbers) and the referencing is not provided in the footnotes.

CME is requested to review and revise the same.

CME response **Date :** 03/08/2022

The numbering of the footnotes has been revised and non-relevant have been removed.

Documentation provided by CME

Revised VPA-DD

VVB assessment **Date:** 05/09/2022

CME has updated the numbering sequence and referencing in the footnotes in the revised VPA-DD and VVB found the changes to be appropriate.

Therefore CAR #06 is closed.

CAR ID 07 **Section no.** A.1 & A.1.1 **Date :** 05/09/2022

Description of CAR

The reference section no's mentioned for detailed manufacturer's technology specifications and geographical boundary are found to be inconsistent.

CME is requested to review and revise the same.

CME response **Date :** 16/09/2022

The references to other section of VPA-DD have been corrected in the revised VPA-DD.

Documentation provided by CME

Revised VPA-DD

VVB assessment **Date:** DD/MM/YYYY

CME has updated the reference for technological specification in Table 1 of section A.1.1 from section A.5 to A.3. VVB found the changes are consistent in the revised VPA-DD submitted.

Hence CAR#07 is closed.

CAR ID	08	Section no.	A.3	Date : 05/09/2022
Description of CAR				
Technical specification provided in the VPA-DD are not in line with the manufacture technical specification document provided as evidence. CME is requested to review and revise the technical specifications of ICS and provide appropriate manufacture specification documents for VPA 07.				
CME response				Date : 08/09/2022
The technical specifications in VPA-DD have been amended.				
Documentation provided by CME				
VVB assessment				Date: DD/MM/YYYY
The technological specifications under section A.3 are updated inline to the manufacture technical specification document provided as evidence. Changes in the updated VPA-DD are consistent. CAR#08 is Closed.				

CAR ID	09	Section no.	B.4	Date : 05/09/2022
Description of CAR				
Section B.4 - Establishment and description of baseline scenario states, "<i>The baseline surveys/KPTs resulted in an average charcoal consumption of 3.7191 kg/day/household (equivalent to 1.35 t/year/household) and an average baseline stove efficiency of 13.01%.</i>" CME is requested to revise the value of baseline fuel consumption consistent with the ER sheet calculation. Correction is requested.				
CME response				Date : 08/09/2022
The value for baseline fuel consumption has been added.				
Documentation provided by CME				
VVB assessment				Date: DD/MM/YYYY
In the revised VPA-DD, the value for baseline fuel consumption has updated to 1.36 t/year/household and VVB found the changes to be appropriate. Therefore CAR #09 is closed.				

CAR ID	10	Section no.	B.5	Date : 05/09/2022
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Description of CAR	
Under section B.5 Demonstration of additionality, Reference for Projects located in "LDC, SIDS, LLDC" is missing. CME is requested to provide the reference.	
Correction is requested.	
CME response	Date : 08/09/2022
The reference has been added.	
Documentation provided by CME	
VVB assessment	Date: DD/MM/YYYY
In the revised VPA-DD, CME has updated the referencing in footnote and VVB found the changes to be appropriate.	
Therefore CAR #10 is closed.	

CAR ID	11	Section no.	-	Date : 05/09/2022
Description of CAR				
In Accordance with the ER sheet: 04082022.GS 11435_ER calculation_10789-VPA7 DRC_v2.0. Under the tab "ER ICS TPDDTEC" cell no. D12, the value considered for project fuel consumption is 0.593 t/hh/y as per assumption of 50% fuel savings from baseline fuel in use. The value assumed in cell no. D12 is punched in value. CME shall elaborate how this assumption of 50% fuel savings from baseline fuel is in use and is arrived at, under the relevant section of the VPA-DD.				
CME response				Date : 16/09/2022
For ex-ante estimations, the value for project fuel consumption has been considered from VPA 5 project KPT. The value has been revised and resulting ERs have been updated in the revised MR as well.				
Documentation provided by CME				
Revised ER calculation sheet and VPA-DD				
VVB assessment				Date: DD/MM/YYYY
With reference to the revise ER sheet: GS 11435_ER calculation BURN GS ECOA PoA_VPA7 DRC_v1.1 CME have updated the value in the tab "ER ICS TPDDTEC", Project fuel consumption from 0.593 t/hh/y to 0.5347 t/hh/y. The data source for Project fuel consumption (Pp,y) is now considered through project KPT and the applied value is 0.53475 tons/household/year. The value has also been cross checked with the similar project GS11435 VPA 7 of the PP and consider a value of 0.53475 tons/household/year based on the KPT conducted for this project. Therefore, the value provided by the PP is valid and appropriate. Hence CAR#11 is Closed.				

Table 3. CL from this validation

CL ID	01	Section no.	-	Date : 29/07/2022
Description of CL				
CME is requested to provide the following documents: 1. Evidence of project start date 2. Stove Efficiency Test Report 3. KML file for the VPA project boundary 4. Documents supporting technical specifications of ICS (also any third-party verified document) 5. Manufacturer's declarations for lifetime of ICS 6. Evidence to substantiate unique serial number of the Improved charcoal cookstove(s) 7. Photograph of ICS, written messages on the stove packaging (strip and/or sticker on the box) and warranty booklet for confirmation of carbon rights transfer to CME 8. Project Database and distribution/sales records of the ICS 9. f_{NRB} Report for project boundary of VPA. 10. Local stakeholder Consultation Documents 11. Evidence to substantiate SDG 1,3,7 & 8. 12. Declaration from the CME that the project has not or shall not claim carbon credits any other scheme after Registration of the project under GS4GG. 13. Undertaking stating that the CME is the sole owner of the ERs generated from the project stove, provided by the local distributors. Note: There may be additional documents required during the validation process and at the time of ESPL's technical review.				
CME response				Date : 03/08/2022
All the requested documents have been provided to the VVB				
Documentation provided by CME				
VVB assessment				Date: 05/09/2022
The status of the documents submitted by CME is as follows:				
Submitted	Pending	Not Mandatory		
Document No: 2,4,5,7,9,10,13,	Document No: 1,12	Document No: 3,6,8,11		
Hence the CL#01 stands open.				
CME response				Date : 16/09/2022
BURN has submitted the document 12 from the above list. However, since the project has not initiated the sales, the start date given in VPA-DD is expected start date. The date has been revised in the VPA-DD.				
Documentation provided by CME				
Declaration from the CME that the project has not or shall not claim carbon credits any other scheme after Registration of the project under GS4GG.				
VVB assessment				Date: DD/MM/YYYY
All the requested documents have been submitted by the CME. Hence, CL#01 is closed.				

CL ID	02	Section no.	A.1	Date : 29/07/2022
Description of CL				
In accordance with section A.1 of VPA DD, <i>"BURN collaborates with various local partners on the ground to assist in the different activities of this cookstove project."</i> CME is requested to kindly clarify about all the partners who are involved in the implementation of VPA 11435 in DRC with supporting evidence.				
CME response				Date : 03/08/2022
The statement has been removed in the revised VPA-DD as BURN has not collaborated with any local partner but handle everything through their teams.				
Documentation provided by CME				
<i>Revised VPA-DD</i>				
VVB assessment				Date: 05/09/2022
With reference to the document provided by the CME 'Altech Group BURN addendum-signed February 2022 _CLAUSE 22_highli'. "BURN MANUFACTURING USA LLC" has signed 'DEED OF VARIATION' with "ALTECH GROUP" according to which BURN, the manufacturer and distributor of various energy saving stoves in Kenya will be selling its stoves to ALTECH GROUP, which is a local distributor of clean, affordable energy in DRC. CME is requested to elaborate the same information in section A.1 of VPA DD. Hence, CL #02 is open.				
CME response				Date : 08/09/2022
Altech Group has been mentioned as a distribution partner in the VPA-DD Section A.1.				
Documentation provided by CME				
VVB assessment				Date: DD/MM/YYYY
In accordance with 'DEED OF VARIATION' submitted, CME has updated 'BURN implements the stoves in this VPA through Altech Group, which acts as the distribution partner for BURN' in VPA DD. Hence, CL #02 is closed.				

CL ID	03	Section no.	B.6.1	Date : 29/07/2022
Description of CL				
Under section B.6.1 states, <i>"The other SDGs impacts of this VPA (SDG 1, SDG 3, SDG 7 and SDG 8) will not be certified as "Certified SDG Impacts" and, therefore, for these impacts no specific methodologies for monitoring and estimation will be used."</i> Clarification is requested.				
CME response				Date : 03/08/2022
The statement has been removed from the VPA-DD since CME is showing monitoring of 5 SDG parameters.				

Documentation provided by CME	
Revised VPA-DD	
VVB assessment	Date: 05/09/2022
CME has revised the section B.6.1 as the SDG impacts of SDG 1, SDG 3, SDG 7 and SDG 8 will be monitored to achieve the SDGs targeted as "Certified SDG Impacts". VVB found the changes in the VPA-DD v2.1 to be appropriate and same has been updated in the ER calculation sheet.	
Therefore CL #03 is closed.	

CL ID	04	Section no.	B.6.2	Date :	29/07/2022	
Description of CL						
Under section B.6.2, Data and parameters fixed ex-ante, CME is requested to clarify why the following parameters are not been considered:						
3) $EF_{ch,prod,CO_2}$ (CO ₂ emission factor arising from production of charcoal)						
4) $EF_{ch,prod,non-CO_2}$ (Non-CO ₂ emission factor arising from production of charcoal)						
CME response					Date :	03/08/2022
The parameter tables have been added to section B.6.2						
Documentation provided by CME						
Revised VPA-DD						
VVB assessment					Date:	05/09/2022
CME has updated section B.6.2 'Data and Parameters fixed ex-ante' in accordance with the methodology guidelines applied for ER calculations for the project. VVB has verified the section B.6.2 and found it to be consistent.						
Therefore CL #04 is closed.						

CL ID	05	Section no.	B.6.4	Date : 29/07/2022
Description of CL				
In Section B.6.4,				
SDG 01				
The net benefit of households achieve monetary savings is around 45.30% and project estimate is 54.70%. However, as per reference footnote no.15. it states "<i>In the project activity, households spend 50% for charcoal instead of 100% in the baseline scenario. This results in charcoal savings of 50%</i>". CME is requested to clarify the difference in project estimate value against SDG 01.				
SDG 07				
With reference to SDG 07, the expected number of ICS usage by the end of 1st crediting period will be 18,000 i.e., as per the usage rate of 90% of estimated ICS of 20,000 (yr-stoves). However, as per footnote reference no.17, the expected number of ICS usage will be "$15,000 \times 90\% = 13,500$". CME is requested to clarify.				
CME response				Date : 03/08/2022

The footnote has been corrected to reflect usage survey results on monetary savings
Similarly the footnote for SDG 07 has also been corrected.

Documentation provided by CME

Revised VPA-DD

VVB assessment

Date: 05/09/2022

Under section B.6.4,

- CME has revised the tables of SDG 01 & 07 and same have been updated in the revised ER calculation sheet.
- Footnote referring to SDG 01 and information referring to SDG 07 has been updated in the revised VPA-DD.

Therefore CL #05 is closed.

CL ID	06	Section no.	C.1.1 & C.2.1	Date :	29/07/2022
Description of CL					
VVB observed the Project Crediting Period to be 02/08/2022 in section C.2.1 and Project Start date to be 01/08/2022 in section C.1.1. CME is requested to clarify, reason for considered the crediting period start date from 02/08/2022.					
CME response					Date : 03/08/2022
A lag of 1 day is considered from the start date (installation) of the ICS to account for installation happening in any time of the start date day.					
Documentation provided by CME					
-					
VVB assessment					Date: 05/09/2022
In accordance with CME's response, the start date of VPA will be 01/08/2022 and start date of crediting period of VPA-07 will be 02/08/2022. A lag of 1 day is considered in start date of crediting period from the start date of the ICS installation. Therefore, the credits would be claimed from 02/08/2022.					
Therefore, CL #06 is closed.					

CL ID	07	Section no.	ER Sheet	Date :	29/07/2022
Description of CL					
File Name: gs11435_ER calculation BURN GS ECOA PoA_VPA7 DRC_v1.0					
• In Accordance with above Excel sheet VVB observed, the ER Sheet does not mention the base calculations for SDG 1, SDG 3, SDG 7 and SDG 8 which are targeted under VPA07. CME is requested to clarify the SDG targets with reference to section B.6.4 of VPA DD. • In the sheet "ER ICS TPDDTEC", the units for $EF_{b,wood,CO2}$ (combined) and $EF_{b,wood,nonCO2}$ (combined) are mentioned as tCO₂e/t charcoal. CME is requested to clarify.					
CME response					Date : 03/08/2022

1. A revised ER sheet including the SDG calculation tab has been provided to VVB 2. The unit has been revised to tCO ₂ e/twood	
Documentation provided by CME	
Revised ER calculation sheet	
VVB assessment	Date: 05/09/2022
In accordance with revised ER calculation sheet v2.0, - CME has added SDG worksheet in the ER calculation sheet. 'Emission Reduction' worksheet provides the ERs calculation for SDG 13 and 'SDG worksheet' demonstrates SDG 1, SDG 3, SDG 7 and SDG 8. SDG targets and their estimated values given in ER sheet are consistent with the VPA-DD v2.1 (Closed). - Under sheet "ER ICS TPDDTEC", the units for EF_{b,wood,CO₂} (combined) and EF_{b,wood,nonCO₂} (combined) have been updated to tCO₂e/t wood (Closed). - In the sheet "Th. Energy savings unit level", Row no. 09- "Project fuel savings per household is assumed as 50% fuel savings". VVB observed value considered for calculating the thermal energy savings per unit level is not in-line with the sheet "ER ICS TPDDTEC". CME is requested to clarify (Open). - CME is requested to mention proper notations in the subscripts for each parameter in the ER sheet, inline to the VPA-DD section B.7.1 (Open). - In the sheet "Th. Energy savings unit level", cell no. C17 is not inline with the para 1.1.3 of Annex-B (Community Services Activity Requirements). Hence the CL#07 stands open.	
CME response	Date : 08/09/2022
- The project fuel savings in "Th. Energy savings unit" tab has been aligned with the savings given in the " ER ICS TPDDTEC" tab. - The proper notations have been added. - C17 has been made in line with para 1.1.3 of the CSA requirements	
Documentation provided by CME	
VVB assessment	Date: DD/MM/YYYY
- The sheet "Th. Energy savings unit level", Row no. 09, the project savings in "has been aligned with the " ER ICS TPDDTEC" tab and found to be consistent. - CME has updated the ER sheet with proper notations in the subscripts for each parameter inline to the VPA-DD section B.7.1. - Under the sheet "Th. Energy savings unit level", cell no. C17 is updated consistent with the para 1.1.3 of Annex-B (Community Services Activity Requirements). Hence CL#07 is Closed.	

CL ID	08	Section no.	Baseline KPT Survey	Date : 05/09/2022
Description of CL				
File Name: BURN GS PoA_10789__DRC_Baseline KPT Surveys v1.1-Jiko With reference to the above mentioned excel spread sheet, under the sheet "Baseline Survey_KPT", the total no. of samples surveyed by CME for baseline KPT survey are 201. VVB observed that the households also use wood and LPG as fuel for cooking, however, the ER calculation considers only charcoal as the baseline fuel. Kindly clarify.				

CME response	Date : 08/09/2022
The usage of the LPG and the wood has been taken into consideration in the ex-post ER sheet. Considering that the CME is submitting for combined design and performance review, this information will be accurately represented in the ex-post ER sheet and the Monitoring Report.	
Documentation provided by CME	
VVB assessment	Date: DD/MM/YYYY
Based on the review of ER Calculation sheet, the validation team confirms that the amount of wood and LPG as fuel used in baseline is negligible. As a result, CME is only claiming carbon credits from replacement of traditional method of fuel usage (charcoal) in following methodology. Furthermore, CME has applied most conservative approach and not claiming carbon credits from wood or LPG.	
Hence, CL #08 is closed.	

CL ID	09	Section no.	C.1.1	Date : 05/09/2022
Description of CL				
Under section C.1.1, the start date of VPA 07 is 01/08/2022 and the start date of VPA 7 under the cover page of LSC report submitted is 23/12/2020. CME is requested to provide a document to substantiate the start date of VPA 07. Clarification is requested.				
CME response				Date : 08/09/2022
The project has not made any sales, therefore, the expected start date has been corrected in the VPA-DD and revised to 1/10/2022. Similar change has also been made to LSC report.				
Documentation provided by CME				
<i>Revised VPA-DD and LSC report</i>				
VVB assessment				Date: DD/MM/YYYY
CME confirms since there is no sale of ICS made in the present VPA, the start date of Project has been revised from 01/08/2022 to 01/10/2022. The submitted revised VPA-DD and LSC report are found to be consistent with the updated start date.				
Hence, CL #09 is closed.				

CL ID	10	Section no.	E	Date : 05/09/2022
Description of CL				

VVB observations are following,	
- In reference to document: 15AUG2022 GS10789_GS11435_Stakeholder Consultation Report, The start date of VPA 7 under the cover page of LSC report submitted is 23/12/2020. This seems to be inconsistent with the section C.1.1 of the VPA-DD. - CME is requested to summarize the dates of LSC meeting under section. E of the VPA-DD.	
CME response	Date : 08/09/2022
- The start date has been corrected in the LSC Report in line with the revised start date in VPA-DD3 - The LSC meeting dates have been included in section E.3 of the VPA-DD	
Documentation provided by CME	
-	
VVB assessment	Date: DD/MM/YYYY
- The start date of Project has been revised from 01/08/2022 to 01/10/2022 under the cover page of LSC. The revised LSC report submitted is found to be consistent. - CME has included the dated of LSC meeting of VPA07 under Section E.3 of revised VPA-DD.	
Hence, CL #10 is closed.	

Table 4: FAR from this validation

FAR ID	01	Section no.	-	Date : 17/04/2023
Description of FAR				
The PD conducts, as proposed, an additional stakeholder consultation before the 2 nd verification process for VPA 11433 (VP5) and before the 1 st verification process for VPA 11435 (VP7) are closed; and addresses all Stakeholder comments. The verifying VVB shall include information regarding the compliance with this request in its corresponding Verification Report.				
CME response				Date : DD/MM/YYYY
NA				
Documentation provided by CME				
NA				
VVB assessment				Date: DD/MM/YYYY