Validation report form for renewal of crediting period of component project activities and design change in PoA

(Version 03.0)

BASIC INFORMATION		
Title and GS reference number of the programme of activities (PoA)	GS reference number: GS 10898 Title: Up Energy Improved Cookstoves Programme, Uganda	
Version number of the validation report	02	
Completion date of the validation report	01/02/2025	
Version numbers of PoA-DD to which this report applies	05.0, dated 24/01/2025	
Title and UNFCCC reference number of each VPA for renewal	VPA Ref. no.	**Title**
	GS 10911	Up Energy Improved Cookstoves Programme, Uganda - CPA No 013
	GS 10912	Up Energy Improved Cookstoves Programme, Uganda - CPA No 014
	GS 10913	Up Energy Improved Cookstoves Programme, Uganda - CPA No 015
	GS 10914	Up Energy Improved Cookstoves Programme, Uganda - CPA No 016
	GS 10915	Up Energy Improved Cookstoves Programme, Uganda - CPA No 017
	GS 10916	Up Energy Improved Cookstoves Programme, Uganda - CPA No 018
	GS 10917	Up Energy Improved Cookstoves Programme, Uganda - CPA No 019
	GS 10918	Up Energy Improved Cookstoves Programme, Uganda - CPA No 020
	GS 10919	Up Energy Improved Cookstoves Programme, Uganda - CPA No 021
	GS 10920	Up Energy Improved Cookstoves Programme, Uganda - CPA No 022
	GS 10921	Up Energy Improved Cookstoves Programme, Uganda - CPA No 023
Sectoral scopes for each VPA	VPA Ref. no.	**Sectoral scopes (indicate mandatory and conditional sectoral scopes)**
	GS 10911	Sector 3/TA 3.1
	GS 10912	Sector 3/TA 3.1
	GS 10913	Sector 3/TA 3.1
	GS 10914	Sector 3/TA 3.1
	GS 10915	Sector 3/TA 3.1
	GS 10916	Sector 3/TA 3.1
	GS 10917	Sector 3/TA 3.1
	GS 10918	Sector 3/TA 3.1
	GS 10919	Sector 3/TA 3.1
	GS 10920	Sector 3/TA 3.1
	GS 10921	Sector 3/TA 3.1
	VPA Ref. no.	**Applied methodologies and standardized baselines**

<table>
<tr><td rowspan="24">Applied methodologies and standardized baselines for each VPA
Number and duration of the next crediting period (CP)</td><td>GS 10911</td><td colspan="2" rowspan="11">REDUCED EMISSIONS FROM COOKING AND HEATING: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) Version 4.0</td></tr>
<tr><td>GS 10912</td></tr>
<tr><td>GS 10913</td></tr>
<tr><td>GS 10914</td></tr>
<tr><td>GS 10915</td></tr>
<tr><td>GS 10916</td></tr>
<tr><td>GS 10917</td></tr>
<tr><td>GS 10918</td></tr>
<tr><td>GS 10919</td></tr>
<tr><td>GS 10920</td></tr>
<tr><td>GS 10921</td></tr>
<tr><td>VPA Ref. no.</td><td>No. of CP</td><td>Duration of the CP</td></tr>
<tr><td>GS 10911</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10912</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10913</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10914</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10915</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10916</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10917</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10918</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10919</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10920</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>GS 10921</td><td>2</td><td>05/12/2024 – 04/12/2029</td></tr>
<tr><td>Coordinating/managing entity (CME)</td><td colspan="3">UpEnergy Group</td></tr>
<tr><td>Host Parties</td><td colspan="3">Uganda</td></tr>
<tr><td rowspan="13">Estimated amount of annual average greenhouse gas (GHG) emission reductions or GHG removals by sinks in the next crediting period (tCO_2e), per VPA</td><td>VPA Ref. no.</td><td colspan="2">Annual emission reductions or removals (tCO_2e)</td></tr>
<tr><td>GS 10911</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10912</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10913</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10914</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10915</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10916</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10917</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10918</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10919</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10920</td><td colspan="2">22,620</td></tr>
<tr><td>GS 10921</td><td colspan="2">22,620</td></tr>
<tr><td>Name and UNFCCC reference number of the VVB</td><td colspan="3">E-0069. 4K Earth Science Private Limited</td></tr>
<tr><td>Name, position and signature of the approver of the validation report</td><td colspan="3">Chandrakala R
 
Managing Director</td></tr>
</table>

SECTION A. Executive summary

>> '4K Earth Science Private Limited' has been contracted by 'UpEnergy Group' to perform a validation of the GS registered VAPs titled below:

VPA Ref. no.	**Title**
GS 10911	Up Energy Improved Cookstoves Programme, Uganda - CPA No 013
GS 10912	Up Energy Improved Cookstoves Programme, Uganda - CPA No 014
GS 10913	Up Energy Improved Cookstoves Programme, Uganda - CPA No 015
GS 10914	Up Energy Improved Cookstoves Programme, Uganda - CPA No 016
GS 10915	Up Energy Improved Cookstoves Programme, Uganda - CPA No 017
GS 10916	Up Energy Improved Cookstoves Programme, Uganda - CPA No 018
GS 10917	Up Energy Improved Cookstoves Programme, Uganda - CPA No 019
GS 10918	Up Energy Improved Cookstoves Programme, Uganda - CPA No 020
GS 10919	Up Energy Improved Cookstoves Programme, Uganda - CPA No 021
GS 10920	Up Energy Improved Cookstoves Programme, Uganda - CPA No 022
GS 10921	Up Energy Improved Cookstoves Programme, Uganda - CPA No 023

under the PoA "Up Energy Improved Cookstoves Programme, Uganda" (GS10898) for renewal of crediting period.

The report is based on the assessment of the revised POA design document/12/, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and GS decisions. This report summarizes the findings from the validation of the POA DD/12/ of the project, performed based on GS4GG criteria for POAs and included an assessment of:
The validation was performed in accordance with the Gold Standard requirements /1/, latest version of Validation and Verification Standard/4/ and related Standards/Guidance and host country criteria, as well as criteria given in POA DD/12/ to provide for consistent project operations, monitoring, and reporting..

The report is also based on the assessment of the voluntary project activity design documents (VPA-DDs), application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools and GS4GG guidance. This report summarizes the findings from the validation of the updated VPA-DDs/14/ of the VPAs, performed on the basis of GS4GG requirements and included an assessment of:

a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period at the time of requesting renewal of crediting period;
b) The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions from the applicable crediting period. This validation opinion is also to be seen in conjunction with the validation report at the time of requesting registration for the first crediting period. The Validation Opinion is not meant to provide any consultancy towards the CME. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

This VPAs will replace conventional biomass stoves, with higher efficiency ICS efficient biomass stoves to residential users by leveraging resources provided by the PoA. The baseline stoves are "3 stone / traditional firewood / traditional charcoal stoves". The CME confirms that this VPA will only disseminate ICS to residential biomass users who would otherwise use baseline traditional stoves.

The review of the project design documentation and the subsequent follow-up interviews have provided 4KES with sufficient evidence to determine the project's fulfilment of all the stated criteria. In our opinion, the project meets all applicable GS requirements.

☒ The GS VPAs are recommended by 4KES for request for renewal of crediting period with the Gold Standard.
☐The Component project activities are not recommended for renewal of crediting period

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 DOE or outsourced entity)	Involvement in			
						Document review	On-site inspection	Interviews	Validation findings
1.	Team Leader & Technical expert (TA 3.1)	EI	Kandari	Sanjay	Central Office	X	-	x	x
2.	Local Expert and Technical Expert (TA 3.1)	EI	Aziz	Dr. Wakibi	Central Office	X	-	x	x

B.2. Technical reviewer and approver of the validation report for RCP

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Puratchikkanal	Ma Paa	Central Office
2.	Approver	IR	R	Chandrakala	Central Office

SECTION C. Means of validation

C.1. Desk/document review

>>
The report is based on the assessment of the GS Voluntary project activity design document version 04 and GS VPA DDs versions 06, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and Gold Standard decesionsa alongwith the relevant CDM decisions.

All the documents used for arriving validation conclusion are listed in Appendix 03 and referenced accordingly in validation report.

C.2. On-site inspection

Site visit and remote audit requirements/5/ and procedures for GS4GG lays down the following:
The governing para 4 of the cited procedure has following provisions:
4.1 | General requirements for all audit instances
4.1.1 | If the project developer explicitly requests an audit to be conducted remotely:

- ✓ CME requested the VVB to undertake the onsite audit remotely.

a. The VVB shall determine whether a physical site visit is mandatory as per the minimum physical site visit requirements as it is validation (Design Certification) as per the below guidance of cited procedure.

3.2 | Audit events

3.2.1 | A physical site visit by VVB is not mandatory at the validation (Design Certification or Design Certification Renewal) of a project

- ✓ The VVB noticed that the PoA and it's VPAs for which the CME contracted the VVB, doesn't fall under the category of mandatory physical site visit as per the below requirements of the cited standard:

3.2.1: A physical site visit by VVB is not mandatory at the validation (Design Certification or Design Certification Renewal) of a project.

b. The VVB shall determine whether or not a remote audit is viable for an audit instance of a given project where a physical audit is not mandatory. The VVB shall conduct the risk assessment applying qualification criteria described in ANNEX 1 - Risk Assessment Guidelines and any additional qualification criteria that VVB finds appropriate for decision making. The VVB is the decision-making body and shall not be unduly influenced by the project developer in this regard. VVB analyzed the risk assessment applying qualification criteria described in ANNEX 1 - Risk Assessment Guidelines and taking into the consideration of project technology and the baseline scenarios considered. The VVB concluded that the remote assessment can be considered for the validation as the baseline scenario was established by referring the third party literatures.

Based on the risk assessment of the undertaken scenarios as per the ANNEX 1 - RISK ASSESSMENT GUIDELINES the following mitigation measures were applied:

Validation team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of validation of the PoA. Along with desk review, audit team has conducted remote (Telephonic, and web-based platforms like skype and WhatsApp) interviews corresponding to the PoA as follows:

- A complete desk review of the submitted VPA-DDs/14/ (initial and final versions), as well as all applicable country legal requirement and supportive evidences have been checked by the validation team.

- Validation team has performed remote audit (Telephonic, and web-based skype and WhatsApp) with representatives of CME and stakeholders (households) in order to check the implementation, current situation, management system of the PoA, programme technology, location, training provided, start date etc.

- Interview questions were posed as per Validation team interview checklist and also video-conferencing was done to check implementation of the VPAs, programme technology, baseline of VPA etc.

- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in the VPA-DDs/14/ and supporting documents.

Duration of Remote on-site inspection: 18/12/2024 to 19/12/2024				
No.	**Activity performed Remote on-site**	**Site location**	**Date**	**Team member**
1.	Baseline KPTs surveys reconfirmance through accepted sampling, stakeholder interactions	Multiple sites in Uganda through remorte assessments	18/12/2024 to 19/12/2024	Sanjay Kandari & Dr. Wakibi Aziz

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Anena	Mercy	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
2.	Natuha	Aniset	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
3.	Teopista	Nankya	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
4.	Atigo	Rebecca	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
5.	Annet	Kansiime	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
6.	Nambozo	Judith	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
7.	Nayiga	Jennifer	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
8.	Nakabugo	Sylivia	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
9.	Anna	Barika	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
10.	Irene	Namutebi	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
11.	Aber	Apio	Baseline-KPT stove owner	18/12/2024	Baseline assessment	Sanjay Kandari & Dr. Wakibi Aziz
12.	Kenneth	Telemu	Stakeholder	19/12/2024	Stakeholder assessment	Sanjay Kandari & Dr. Wakibi Aziz
13.	Onen	Alex	Stakeholder	19/12/2024	Stakeholder assessment	Sanjay Kandari & Dr. Wakibi Aziz
14.	Winfred	Akisa	Stakeholder	19/12/2024	Stakeholder assessment	Sanjay Kandari & Dr. Wakibi Aziz
15.	Wanyaka	Andrew	UpEnergy personnel	19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
16.	Anayo	Sheila	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
17.	Atim	Brenda	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
18.	Mujune	Maxensia	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
19.	Nalwanga	Sophia	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
20.	Nakyala	Ritah	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz

21.	Asiimwe	Bridget	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
22.	Matua	Luiji	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
23.	Mukhwana Kakai	Prisca	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods	Sanjay Kandari & Dr. Wakibi Aziz
24.	Kinyera	Emmanuel	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods, GS Requirements	Sanjay Kandari & Dr. Wakibi Aziz
25.	c.k.	Kumarswamy	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods, GS Requirements	Sanjay Kandari & Dr. Wakibi Aziz
26.	Sharma	Karan	UpEnergy personnel	18/12/2024 & 19/12/2024	Baseline KPT methods, GS Requirements	Sanjay Kandari & Dr. Wakibi Aziz

C.4. Sampling approach

>> As stated in section C.2 above, a remote auditing was conducted for 11 VPAs covered uder the scope of RCP. Sampling approach was applied during remote auditing with respect to para 29 (e) ii) of CDM VVS for PoA version 03.0 /12/ to check the physical implementation of the CPA in line with the registered PoA /03/ and assess the baseline as stated in VPA-DDs /01/. CME has provided the baseline KPT records /15/ and random samples from the list were checked. In order to meet the requirement of paragraph 24 and 25 of "Sampling and surveys for CDM project activities and programmes of activities Version 09.0 /17/, simple random sampling was applied. 11 baseline KPT's users samples were checked by remote auditing and compared the observations with the information mentioned in the VPAs database /14/, baseline survey /16/, VPA-DDs /14/ and other documents. Sampling approach using the Standard (Sampling and surveys for CDM project activities and programmes of activities Version 09.0) has been applied as per Table on page 13 "Sample size and acceptance number based on AQL, UQL, and producer and consumer risks.

The following approach for the same from the table in standard is chosen:
• AQL 0.5%, UQL 20%,
• Producer risk: 10%
• Consumer risk: 10%
with "0" acceptance number to arrive at the sample size from each appliance i.e. improved cookstove.

The details including baseline practice, date of distribution of project ICS, type of product, Unique id of ICS, name of user and address etc. were verified and found to be consistent with the ones reported in the database and other supportive documents. No inconsistency was observed for any of the samples. Summary is below:

Parameters/Asects	Total Sample size of CME for Updated baseline KPT	CME's sample size for baseline survey	Acceptance sample size	Acceptance Number	Sampling method used

baseline practice, date of KPTs, type of product, baseline charcoal consumption inter alia.	90	185	11	0	Acceptance Sampling based on random selection of households.

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

Area of validation findings (SECTION D)	No. of CL	No. of CAR	No. of FAR
VPAs to be renewed and corresponding generic VPAs	-	-	-
Compliance with VPA-DD form	-	-	-
Application and selection of methodologies and standardized baselines	01	-	-
Validity of original baseline or its update	02	-	-
Demonstration of eligibility of the VPAs	-	-	-
Estimated emission reductions or net anthropogenic removals	01	-	-
Validity of monitoring plan	02	-	-
Crediting period	-	-	-
CME and project participants	-	-	-
Post-registration changes	01	-	-
Others (please specify)	-	-	-
Total	07	0	0

SECTION D. Validation findings

D.1. VPAs to be renewed and corresponding generic VPAs

Title and GS reference number of the real case VPA	Version number of the VPA-DD	Host Party	Title and reference number of the corresponding real VPA	Version number of the PoA-DD on which the RCP is based
GS 10911, Up Energy Improved Cookstoves Programme, Uganda - CPA No 013	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10912, Up Energy Improved Cookstoves Programme, Uganda - CPA No 014	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10913, Up Energy Improved Cookstoves Programme, Uganda - CPA No 015	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10914, Up Energy Improved Cookstoves	7.0	Uganda	N/A VPA itself is the real case VPA	04.0

Programme, Uganda - CPA No 016				
GS 10915, Up Energy Improved Cookstoves Programme, Uganda - CPA No 017	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10916, Up Energy Improved Cookstoves Programme, Uganda - CPA No 018	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10917, Up Energy Improved Cookstoves Programme, Uganda - CPA No 019	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10918, Up Energy Improved Cookstoves Programme, Uganda - CPA No 020	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10919, Up Energy Improved Cookstoves Programme, Uganda - CPA No 021	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10909, Up Energy Improved Cookstoves Programme, Uganda - CPA No 0122	7.0	Uganda	N/A VPA itself is the real case VPA	04.0
GS 10910, Up Energy Improved Cookstoves Programme, Uganda - CPA No 023	7.0	Uganda	N/A VPA itself is the real case VPA	04.0

D.2. Compliance with VPA-DD form

Means of validation	VPA-DDs/14/ applies the applicable version VPA DD form available on the GS website. Validation team verified that the renewal crediting period, information transferred to the later valid version of the VPA-DDs form is materially the same as that in the registered VPA-DDs apart the sesign change applied during the RCP.
Findings	Nil
Conclusion	All the information has been correctly transferred from registered VPA-DD to the current VPA-DD and the validation team confirms that the transfer of information from the old form to the new form is correct and materially the same as the information in the registered VPA-DDs and also in compliance with the latest PoA-DD/12/ which is further in compliance with corresponding reqirements in GS PoA Reuirements.

D.3. Application and selection of methodologies and standardized baselines

Means of validation

At the time of VPA inclusions, the VPAs applied the following methodology:

CME has applied the latest version of methodology (TPDDTEC, v4) in the PoA DD in place of the CDM methodology AMSIIG by seeking a design change and the VPAs accordingly updated to apply the TPDDTEC, v4/10/ . This is in compliance with the GS4GG 'Principle & Requirements' and also in compliance with the GS POA Requirements.

Therefore, the revised VPAs were validated against TPDDTEC, v4/10/ requirements, as assessed below:

Applicability Criteria	Justification By CME	Validation Remarks
Project shall choose a technology design that has predictable performance in that it is proven to be efficient and durable under field conditions; for cookstoves, the rated thermal efficiency shall be at least 20%	All VPAs under this PoA involve the distribution of efficient improved cookstoves, all of which have efficiencies greater than 20%. The list of stoves to be distributed with their rated efficiency is given below: **Stove Model[1] — Thermal Efficiency** **Energy Empire — 33.00%** **SHS-BME — 31.00%** **FSL — 35.70%** **Lugwana — 34.75%** **SHS-BOLD — 37.30%** **SHS-ILF — 38.00%** **SpendSmart — 36.30%** Evidence: Manufacturing specification	Technical specification/18/ alongwtih the WBT results have been validated and it was found that the all soves included under the VPAs have much higher efficiency than the threshold of 20%.
The technology shall have continuous useful energy output of less than 150kW per unit, where "continuous useful energy output" is defined above.	The project technology have continuous useful energy output of less than 150kW per unit. Evidence: Ex ante calculation sheet	The energy saving calcutaion was demonstated in the ER sheet and validated correct. The output is less than 150kW per unit. Therefore the compliance was found meeting by the validation team.
The project activity is implemented by a project developer and can include additional project participants listed in	i. Criteria for transfer of carbon credit ownership:	The 18 carbon waiver forms/22/ were validated by the validation

[1] Subjective to the availability, CME may introduce new stove models.

	Appendix 2 of the PDD template. The individual households and institutions may be represented collectively by community organizations, etc., but do not individually act as project participants.	• For regular cycle VPA, this shall be ensured through relevant provisions for example disclaimer on warranty/information cards, stove packaging, customer agreements / sales receipts / consent form or maybe collected via monitoring app, etc. or collecting stakeholder feedback on this issue during local stakeholder consultation (LSC) • For retroactive VPA, this shall be ensured through relevant provisions for example disclaimer on warranty cards, stove packaging, customer agreements / sales receipts/ consent form or maybe collected via monitoring app, etc., or stakeholder feedback collected during Stakeholder Feedback Round (SFR). ii. The ICS owners will be transferring their rights on ownership of carbon credits to CME via the end-user agreement/consent form or via monitoring app etc (refer to Eligibility under GS4GG section above). The same has been discussed during stakeholder consultations. Evidence: Carbon waiver	team, the project stoves were distributed to the households and the carbon right transferred was obtained by the CME.
	The project developer must design incentive mechanism(s), which should be effective as fast as possible, for the elimination of inefficient baseline stoves that are replaced by the project cooking devices and describe the incentive mechanism(s) in the PDD/VPA-DD at the time of validation.	The project developer will offer the improved technology at highly subsidized rates, making it more accessible to a larger user base. Additionally, the developer will provide a 5-year warranty on the technology, encouraging continued use of the improved cookstoves and reducing the likelihood of reverting to baseline stoves during the project implementation.	The project developer will offer the improved technology at highly subsidized rates, making it more accessible to a larger user base. Additionally, the developer will provide a 5-year warranty on the technology, encouraging continued use

			of the improved cookstoves and reducing the likelihood of reverting to baseline stoves during the project implementation. The CME confirmed the same during the remote assessment. The 18 warranty cards/22/ were submitted to the validation team.
	To avoid double counting or double claiming, the project developer must: i. clearly communicates its ownership rights and intention of claiming the emission reductions resulting from the project activity to the following parties by contract or clear written assertions in the transaction paperwork: all other project participants; project technology manufacturers; and retailers of the project technology or the renewable fuel in use; and ii. inform and notify the end users that they cannot claim emission reductions from the project, and iii. exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace	To avoid the double counting, the project activity will install ICSs with has a unique serial number, which avoids stove duplication. i. Criteria for transfer of carbon credit ownership: • For regular cycle VPA, this shall be ensured through relevant provisions for example disclaimer on warranty/information cards, stove packaging, customer agreements / sales receipts / consent form or maybe collected via monitoring app, etc. or collecting stakeholder feedback on this issue during local stakeholder consultation (LSC) • For retroactive VPA, this shall be ensured through relevant provisions for example disclaimer on warranty cards, stove packaging, customer agreements / sales receipts/ consent form or maybe collected via monitoring app, etc., or stakeholder feedback collected during Stakeholder Feedback Round (SFR). ii. The ICS owners will be transferring their rights on ownership of carbon	Evidence: Carbon waiver/22/, No double counting declaration/23 / have been validated by the validation team. The project was initially registered with CDM but CME has updated it as voluntary project and declaration to this affect has been submitted to validation team.

	the cooking devices of another CDM or voluntary project/PoA.	credits to CME via the end-user agreement/consent form or via monitoring app etc (refer to Eligibility under GS4GG section above). The same has been discussed during stakeholder consultations. iii. Proper data analysis will be conducted in distribution database to identify any duplicates within all VPAs. To enhance the credibility, a no double counting declaration has been submitted to VVB. Evidence: Carbon waiver, No double counting declaration	
	Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting certain conditions described in the footnote to Table 1 (e.g. switch from three-stone fire biomass stoves to LPG stoves) may only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations.	Not Applicable	Not Applicable as project is claiming energy efficiency benefits only. There is no fuel switch and LPG included in the POA framework.
	Project activities making use of a new solid biomass feedstock in the project situation (e.g. switch to green charcoal or renewable biomass briquettes) must comply with relevant specific requirements for biomass related project activities, as defined in the latest version of the Community Services Activity	Not Applicable	Not Applicable

	Requirements. The specific requirements apply to both plantations established for the project activity and/or existing plantations that will supply biomass feedstock.			
	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. Furthermore, for projects where cooking will move from outdoor to indoor or where the project technology reduces ventilation (for example, changing from a stove with chimney to improved stove with no chimney), indoor air pollution (IAP) levels shall not worsen in the project compared to the baseline, including PM 2.5 and carbon monoxide (CO) emissions. This may be demonstrated before project Design Certification or during project operation using the certification resulting from of a manufacturer's test, report of field testing of the technology's PM 2.5 and carbon monoxide (CO) emissions, report of lab testing of the	Baseline: The baseline was established based on the study conducted by WinnifredK. in 2022 in Uganda. The study revealed that the concentration of PM2.5 during cooking time in the cooking area was 175.93 µg/m³, while the concentration of CO was approximately 41.22 ppm[2]. Project: The CME will measure the concentration of PM 2.5 and carbon monoxide (CO) emissions during each monitoring verification or a lab analysis will be conducted on the selected stove models to measure the IAP concentration during cooking.	Baseline: The baseline was established based on the study conducted by WinnifredK. in 2022 in Uganda. The study revealed that the concentration of PM2.5 during cooking time in the cooking area was 175.93 µg/m³, while the concentration of CO was approximately 41.22 ppm[3]. Project: The CME will measure the concentration of PM 2.5 and carbon monoxide (CO) emissions during each monitoring verification or a lab analysis will be

[2] https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-022-14015-w
[3] https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-022-14015-w

	technology, or results of modelling of the technology's operation under field conditions. If none of these are available, reference from published literature or report by independent agencies may be used as evidence, provided it is not more than 5 years old.		conducted on the selected stove models to measure the IAP concentration during cooking. The reports provided in the links was found by the validation team correct and reasonable that the project stoves will reduce the IAP
Findings	CL#01 was raised and successfully closed. Refer to appendix 4 for further details.		
Conclusion	The VPAs fulfills all relevant criteria of the applied methodology TPDDTEC, v4. Hence use of the selected methodology is appropriate for the VPAs submitted for the RCPs.		

D.4. Validity of original baseline or its update

Means of validation	The validity of the baseline was assessed in the VPA level renewal in accordance with the applicable validation requirements in the GS Validation & Verfication Standard in conjunction with CDM VVS PoA. Therefore, it can be concluded that the original baseline is still valid for the current VPAs. Also, as per para 392 of the CDM VVS PoA/19/, the validation team confirms that the following parameters have been updated from the registered VPA-DDs: As the Project is undergoing renewal of the crediting period, a revised baseline was established as per the CDM Tool 11 [4] "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" (Version 03.0.1)/20/, new baseline parameter values have been established for this renewal period. A stepwise baseline establishment approach has been demonstrated below: **Step 1: Assess the validity of the current baseline for the next crediting period** **Step 1.1: Assess impact of national and/or sectoral policies on the modalities to estimate baseline GHG emissions** The project is located in Uganda. One of the major causes of deforestation in Uganda is the use of biomass for domestic and institutional cooking. With this practice pervasive, the health and environmental impacts are widespread and severe: it results in significant greenhouse gas (GHG) emissions, causes deforestation if non-renewable biomass is utilized to yield thermal energy, threatens biodiversity, and can create an economic hardship for families to access clean cooking. Families that use traditional biomass on inefficient cookstoves are left

[4] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-11-v3.0.1.pdf

	vulnerable to the negative effects of poor indoor air quality. Uganda's Renewable Energy Policy was adopted in 2007 whose targets were to increase the rate of adoption of efficient charcoal stoves from 20,000 in 2007, to 2,500,000 by 2017 in urban areas and efficient fuel wood stoves from 170,000 in 2007, to 500,000 by 2012 and 4,000,000 by 2017 (SNV, 2014). In addition, the policy was to offer training opportunities for artisans at the village level for the manufacture, installation and maintenance of efficient cooking stoves. However, In 2023, traditional biomass—primarily wood and charcoal used for household cooking—made up approximately 87% of total energy consumption. Oil products, such as petrol and diesel used mainly for transportation, accounted for about 11%, while electricity, mostly generated from hydropower, represented just 2%. Households were the largest energy consumers, making up 61% of final energy use, followed by industry at 22%. Transportation consumed 7%, while commercial and public services together accounted for around 9%[5].The country has not had the financial and technical support, nor created the enabling conditions required to attract the level of private investment needed to create a thriving market for clean cookstoves and fuels. There is also weak collaboration between government and private sector in the drive to meet the policy targets. There is no mandated government programme or policy in host country of this project ensuring the distribution of domestic fuel-efficient cookstoves. The project is not mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework. The assessment team has been checked through search of any laws which are mandated to install efficient charcoal cooking device is Uganda and found that there are no any such mandated laws for implementation of project activity. A review is made on Uganda environmental laws and regulations/29/30/34/ has been carried and found that there is no mandatory legal requirement for installation of efficient electric cooking devices in households/ institutions of Uganda. Further the following rules/regulations have also referred: a) The National Environment Act, 2019/29/ b) The National Environmental (Audit) Regulations, 2020/27/ c) The National Environment (Environmental and Social Assessment) Regulations, 2020/27/ d) National Environment Action Plan (NEAP) and National Environment Management Policy (NEMP) of 1994/30/ Hence there is no mandatory legal requirement for installation of improved cookstoves in households/institutions of Uganda. Also, CME, manufacturer, distributor and household owners are interviewed during audit and confirmed that this project activity is voluntary and not mandated by any laws. Validation team has assessed aforementioned regulations to confirm that the VPAs are not part of any regulatory compliances. **Step 1.2: Assess the impact of circumstances** As explained above, biomass remains to be the most consumed fuel for meeting primary energy demand in Host country(ies) over last several decades. The existing circumstances /policies do not have an impact on the modalities to calculate baseline GHG emissions. **Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is** **requested.** The continuation of current baseline is the most likely scenario for the period for which renewal is sought as demonstrated above. The use of traditional biomass

[5] https://www.iea.org/reports/uganda-2023/executive-summary

	cooking is prevalent across the host country and their penetration rate in the host country remains significantly unchanged and most plausible baseline scenario. **Step 1.4: Assessment of the validity of the data and parameters** Data and parameters used for determining the original baseline, that were determined ex ante and not monitored during the PoA period and which are no longer valid have been updated accordingly. **Step 2: Update the current baseline and the data and parameters** Applicable, as the data and parameters used were only determined at the start of crediting period and not monitored in between. **Step 2.1: Update the current baseline** Following the section 1.2 and 2.2 of CDM Tool 11[6] "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" (Version 03.0.1), new baseline parameter values have been established for this renewal period. **Baseline survey** CME has conducted 185 baseline surveys during the month of August and September of 2024. Field questionnaires for both the baseline assessment survey and the Kitchen Performance Test were meticulously designed to ensure accurate representation and comprehensive understanding of the baseline technologies in use. Rigorous quality assurance measures were implemented to maintain data integrity throughout each phase of the survey. According to the Uganda Demographic Health Survey 2022 report, 99% of households in Uganda use solid fuels for cooking, with wood being the predominant fuel at 67%, followed by charcoal at 24%, straw/bush (4.9%) & LPG 0.4% while 2.4% of households does not conduct cooking at home. Based on the literature review, socio-economic parameters, and geographic accessibility, potential regions were identified for improvement in cooking technology. These regions will serve as the basis for a baseline study across the project boundary **Sampling Frames** To establish the sampling framework for this survey, a stratified multistage random sampling design was employed. Initially, the target population for the carbon mitigation activity was categorized into four administrative regions: Western, Central, Eastern, and Northern. These regions serve as standard boundaries for governmental statistical analysis and reporting on energy and fuel consumption patterns. Secondly, the regions were further clustered into urban (Cluster A) and rural (Cluster B) categories based on the socio-economic characteristics of the localities. This classification aligns with the preliminary results of the National Population and Housing Census 2024. Additionally, assistance was sought from country experts and local knowledge provided by in-country teams to identify urban/rural strata across the regions. The sample size considered for the baseline survey follows the TPDDTEC version 4.0 guidelines. For a group size exceeding 1,000, a minimum of 100 samples is required for the baseline survey. Consequently, the total number of samples surveyed was 185, which includes 85% oversampling, and it covered all four administrative regions of Uganda. The sample size calculated for baseline - Kitchen Performance Test (bKPT) is as per CDM -EB67-A06-GUID Guideline Sampling and surveys for CDM project activities and programmes of activities (Version 4.0) and CDM Sampling and surveys for CDM project activities and programmes of activities (Version 9.0). Hence, 90 households have been selected for bKPT. Sample households were randomly selected from the four targeted project regions based on their population weight and urban/rural strata to ensure that the samples accurately represent the targeted population. Field questionnaires for both the baseline survey and bKPT have been designed to provide a comprehensive understanding of the various baseline technologies. The baseline questionnaire includes essential information such as the current cooking device, the type of fuel used, and variations in usage during rainy or dry seasons. Additionally, the baseline survey collects data on the respondent's name, age

[6] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-11-v3.0.1.pdf

group, number of individuals, household income, contact details, geographical coordinates etc.

The kitchen performance questionnaire included fuel usage, moisture content of fuel, etc. The bKPT was done over a period of 4 days as per the KPT protocol to capture the fuel consumption and moisture content of the fuel. The brief process of KPT was that each day morning the surveyor team would weigh fuel (charcoal/ firewood) using calibrated weighing scale and the households would be asked to use the weighed fuel for cooking for the entire day. The next day the team would weigh the remaining fuel and add some more fuel to use for the second day. The process was repeated for 3 days. On the fourth day morning the remaining fuel was weighed and recorded. In each day, the moisture was measured before using as fuel in the cookstove using digital moisture meter.

Sampling Calculation

Total 185 households have been selected for the baseline survey. For the calculation of minimum baseline KPT samples, CDM -EB67-A06-GUID Guideline Sampling and surveys for CDM project activities and programmes of activities, and CDM Sampling and surveys for CDM project activities and programmes of activities have been applied which adopts the student's t-distribution method if the parameter of interest is a numeric mean value and by applying 90%/10% confidence/precision level.

Thus, 90 households have been selected for KPT. 26.77% of the Uganda population is living in rural area and 73.33% is living in rural. The number of samples for baseline survey and KPT are proportionally allocated to the strata as per the table 1. Within each region, urban and rural segments were identified.

	% of Population		Samples for baseline survey		Samples for KPT	
Region	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
East	24.86%	75.14%	12	31	6	15
West			9	37	6	17
North			6	30	5	12
Central			19	41	7	22
Total			46	139	24	66

Quality Control

Experts from the country team had daily debriefings with the enumerators to discuss any issues encountered on the field. The surveys were conducted through a mobile application and all information were uploaded onto ODK Collect platform on a real time basis. The survey results are reviewed online and checked for any errors for immediate action to be taken. Moreover, after completion of the surveys, calls were made randomly to about 10% of the surveyed households to validate the survey results.

Update the current baseline

The ex-ante parameters for baseline emissions for the subsequent crediting period, have been updated, based on the latest approved version of the methodology, as follows:

Update the data and parameters

Ex-ante Parameter	2nd Crediting Period
Pb,y (tonnes/year)	5.13 tonnes/HH/year as per the Baseline study.
Pb,y (tonnes/year)	4.18 tonnes/HH/year as per the capped value in RECH v.4 (HH number considered as 4.4)
$f_{NRB,b,y}$ (fraction)	Uganda: 0.76 (calculated as per tool 30)
NCVb,fuel	0.0156 TJ/tonne
$EF_{b,f,CO2}$	112 (tCO_2/TJ)
$EF_{b,f,non-CO2}$	9.46 (tCO_2/TJ)

CME also submitted the SDG impact tool assessing all the SDGs ex-ante, the tool was found applied adequately.

Ongoing Financial Need:

CME clarified that the project renewal represents a continuation of VPAs 1. The project will involve the installation of new Improved Cookstoves (ICS) in Uganda at subsidized rates, aimed at addressing climate change and reducing emissions from

	conventional charcoal stoves. Through the VPA, the dissemination of ICS will replace existing, inefficient traditional cooking stoves that use charcoal for cooking. Each VPA under the programme will contribute to the project's objectives of reducing fuel consumption, improving health outcomes, and mitigating deforestation in Uganda. The cookstoves are distributed at subsidized rates, and the costs for distribution, maintenance, and overall project management are high and have no external funding. Carbon finance is therefore crucial to keep the project running. Emission reductions certified by the Gold Standard will provide the funds needed for operations and registry costs, helping the project continue and fight climate change while helping the communities. The clarification assessed reasonable in terms of the ongoing financial needs of the VPAs.
Findings	CL#02, CL#03, CL#04 were raised and closed. Refer Appendix 4 for the details.
Conclusion	I. Validity of the baseline has been correctly assessed and the parameters are updated as per the Methodology Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" /20/ in the validated PoA-DD submitted for the renewal of crediting period. The same is applicable for the CPA. II. VVB confirms that other than CDM the project is not registered in any GHG mechanism, this was reviewed by checking the project in various GHG registries. CME confirmed that the project will not cliam CERs in CDM scheme.

D.5. Demonstration of eligibility of the VPAs

Means of validation

According to the PoA registered in GS the proposed VPAs shall comply with the following eligibility criterion:

As per section 3.1.1 of GS4GG Principles & Requirements/1/, compliance with relevant Eligibility criteria is demonstrated below:

Eligibility Criteria Category	Eligibility criterion - Required condition	Justification by CME
1. Types of Project	Eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are identified in the Eligibility Principles and Requirements section.	The VPA is already implemented since 29/08/2018. The VPA is already one of the pre identified types as per section 3.1.1 (b) of GS4GG Community Services Activity Requirements and automatically eligible for Gold Standard Certification as per section 4.1.3 of GS4GG Principles & Requirements.
2. Location of Project	Projects may be located in any part of the world.	Location of the VPA is the Republic of Uganda.
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	The boundary for the VPA in terms of a geographical area is defined as the territorial boundary of the Republic of Uganda. To avoid inclusion of any stove which is a part of another registered carbon project/ programme, all ICS under this VPA have a

		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)	unique ID number, inscribed on the stove, to uniquely identify the ICS avoiding any double counting and trace its user, later during monitoring and verification.	
	4. Host Country Requirements	Projects shall be in compliance with applicable Host Country's legal, environmental, ecological and social regulations.	The VPA complies with Uganda's legal, environmental and ecological and social regulations.	
	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 insolvency or legal/criminal notices placed against it or any of its Directors). Gold	Name and Contact details of VPA Implementer is given in the Appendix 2.	

		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.	This is being ensured through disclaimer on warranty/customer agreements for each ICS under the VPA. Further, this has been discussed during the Stakeholder Feedback Round (SFR).	

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 declaration at the time of Design Certification.	No ODA is involved in the PoA. Hence , all VPAs under the PoA are automatically deemed in compliance.

Eligibility for VPA inclusion as per PoA requirements

ELIGIBILITY CRITERION	**DESCRIPTION/ REQUIRED CONDITION**	**DESCRIPTION OF THE VPA IN RELATION TO THE CRITERIA, MEANS OF VERIFICATION AND SUPPORTING EVIDENCE FOR INCLUSION**
Geographic Boundary	Each SSC VPA shall involve installation of ICS within the geographical boundary of Uganda.	The VPA involves distribution of ICS is limited to the geographical boundary of Uganda.

			Evidence - Invoice Sales database
Double Counting	Each SSC VPA shall have a system to ensure that ICS bear logo of the PO /CME to ensure their unique association to the PoA. Provisioning a system to ensure transfer of ownership of emission reductions, generated by project devices, from end user to PO/CME.	1. ICS distributed under the VPA bear a unique ID number to uniquely identify the ICS and avoid double counting. 2. The ICS owners transfer their rights on ownership of carbon credits to CME via the end user agreement / Sales receipt Evidence – . stoves photo bearing unique ID number End user agreement template
Exclusiveness of VPA	The VPA shall not be previously: 1. Registered as a project activity, or 2. Included as a CPA in any other registered PoA, or 3. Deregistered as a CPA of a PoA	CME confirms the following: 1. The VPA is not Registered as a project activity, or 2. The VPA is not included as a CPA in any other registered PoA, or 3. The VPA is not deregistered as a CPA of a PoA Evidence – Declaration by CME
Specifications of Technology/Measure	1. **Type** - The VPA will promote dissemination of improved biomass ICS in Uganda. **Specification** - The rated efficiency of technologies included under the program shall be at least 20 per cent.	1. **Type** - The VPA promotes dissemination of biomass ICS Model in Uganda. 2. **Specification** - The rated efficiency of ICS included in the VPA is

			more than 20%. Evidence – ICS distribution database ICS specification sheet. CME confirmed that the framework of POA would remain unchanged and the stoves distributed during CP1 that are still within their validity period will continue to be included in CP2. A thorough monitoring process will be conducted during verification to assess whether stoves older than 5 years are still operational. Additionally, a distinct usage rate will be applied to calculate the Emission Reductions for stoves that are less than 5 years old and those exceeding 5 years of age, in line with the FAR raised in the design change approval as below: FAR#1: "In the design change memo, it is stated that monitoring surveys done by the CME included at least 25% of samples taken from stoves older than 5 years, however, it has not been mentioned the drop off rate established for stove older than 5 years. CME shall carry out a survey to establish the drop off rate of cluster of stoves which are older than 5 years	

				and compare with rate which has already been established for those which are 5 years and below. If the rates differ by a margin of -+5%, then the stoves above 5 years will apply their distinct drop off rate value and those below to apply their already established drop off rate value. This requirement will be checked by the VVB in the next verification since the current verification was combined with design change". CME ensures that all local partners (if any) and end users are aware of the fact that UpEnergy Group is claiming ownership rights of and selling the emission reductions resulting from the project activity. A formal agreement will be established to facilitate the ownership of carbon credits generated by stoves from manufacturer to CME and will be submitted to a VVB at the time of project verification. Documentation has been carried out to transfer the carbon credits from the users to the CME through a carbon waiver disclaimer, which is part of the sales / distribution receipt. The confirmation provided by the CME assessed reasonable.	

	Start Date	Date on which first ICS was installed under the VPA. The start date of any proposed VPA will be on or after the start date of the PoA	The VPA start date is 16/08/2018 which is the date of invoice of first shipment under the VPA. The evidence of the same has been submitted to validation team. Moreover the database was reconfirmed to check it. Evidence - Sales Invoice for the first ICS distributed in the VPA.	
	Applicability of the methodologies	VPA must follow RECH v.4 The applicability of methodology at VPA level has been demonstrated in section B.2 below. Technology related requirements stipulated by the methodology have been specified in criteria #4 above.	VPA is applying RECH v.4. For technology related requirement please refer criteria #4 above.	
	Additionality	Each VPA will satisfy the criteria for demonstrating additionality through one of the following options: **Option 1:** As per Activity Requirement: As per GS4GG Community services activity requirements, Version 1.2, Para 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 of this document) (b) Projects located in LDC, SIDS, LLDC (c) Microscale projects	The project is additional as per Option 1: GS4GG Community services activity requirements, Version 1.2, Para 4.1.9. Refer section B.5 below for details.	

		Option 2: As per tool 21: "Demonstration of additionality of SSC project activities" **Option 3:** As per tool 19: "Demonstration of additionality of microscale project activities"		
	LSC and EIA	The local stakeholder consultation is conducted at the PoA level (Section F of the PoA-DD) and is not required at VPA level An environmental impact analysis is not required	--	
	Public Funding	Affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance	This VPA does not receive any public funding from Annex 1 countries. Refer section A.5.	
	Target Group	Target Group: Households / Small institutions	The target groups are households in Uganda. Evidence - Sales database	
	Sampling	VPAs under the program will adhere to all requirements as mentioned in Standard: Sampling and surveys for CDM project activities and programme of activities and "Guidelines for sampling and surveys for CDM project activities and programme of activities".	The sampling plan follows Guidelines for sampling and surveys for CDM project activities and programme of activities. Please refer to PoA DD.	
	SSC Threshold	CPA will meet the following small-scale threshold criteria: 1. Annual thermal energy savings not exceeding 180-gigawatt hours thermal	The VPA is a type II category VPA. As per ex-ante ER calculator the rated annual thermal energy savings of each ICS is merely 0.01GWh$_{th}$ which	

		(GWh_{th}) equivalent per year every year throughout the crediting period. However, if CPAs are solely comprised of micro-scale units, then the above is not required	is much lower than the given threshold of 180-gigawatt hours thermal (GWh_{th}) equivalent per year.	
	De-bundling Check	As per GS4GG Programme of activities requirements section 10.1.1, de-bundling provisions do not apply to Voluntary PoAs.	Not Required	
	VER Ownership	Each VPA will assure ownership of the VERs is secured by the CME.	The ICS owners transfer their rights on ownership of carbon credits to CME via the sales receipt /consent form /carbon waiver form etc. Alternatively, this may be communicated to the end users, at the time of purchase / distribution via disclaimer on the product packaging. UpEnergy (CME) has full and uncontested legal ownership of GS VERs (SDG 13) that are generated from use of products distributed under the VPA (VERs rights). For units distributed under the project, the beneficiary agrees to transfer the ownership of GS VERs to UpEnergy at the	

			time of purchase / distribution of product. Refer purchase orders / sales receipts which transfers the rights of VERs from beneficiary to CME or VPA Implementer.	
	Safeguarding Principles Assessment	Conducted at PoA level	Not Applicable	
	SDG Outcome Assessment	The monitoring plan for SDG shall include: 1. Average household savings due to decrease in expenditure on basic services due to adoption of project technology/ measures 2. Average time saving associated with cooking time and fuel collection 3. Number of beneficiaries household 4. % of ICS operating 5. Number of male/female persons hired Woodfuel savings reported by user under project	VPA-DD SDG monitoring plan detailed in section B.7 of this VPA DD.	
Findings	CL#05 was raised and closed. Refer Appendix 4 for the details.			
Conclusion	The validation team was able to confirm that the eligibility criteria for the renewal of crediting period of VPAs defined in the PoA-DD is in accordance with the applicable requirements in para 124 of the CDM PS for PoA.			

D.6. Estimated emission reductions or net anthropogenic removals

Means of validation	The VPAs includes distribution of efficient Improved Cookstoves (ICS) with the aim to reduce greenhouse gas (GHG) emissions from the burning of non-renewable woody biomass and/or charcoal for cooking in Mozambique. The outcome of the SDG 13 (Climate Action) will be measured as reduced greenhouse gas emissions measured as tonnes of CO2e applying the GS methodology RECH v.4. The SDG 13

outcome will be certified as “Certified SDG 13 Impacts” allowing the generation of carbon credits (GS VERs).
When the baseline fuel and the project fuel are the same and the baseline emission factor and project emission factor are same, the overall GHG reductions achieved by the project activity in year y are calculated as follows:

$ER_y = \Sigma_{b,p} (N_{b,p,y} * U_{p,y} * SFS_{p,b,y} * NCV_{b,\,fuel} * (f_{NRB,b,y} * EF_{b,f,CO2} + EF_{b,f,nonCO2})) - \Sigma LE_{p,y}$ (1)

Where:

ER_y	Emission reduction for total project in year y (tCO2e/yr)
$\Sigma_{b,p}$	Sum over all relevant (baseline b/project p) couples
$N_{b,p,y}$	Number of project technology-days included in the project b/project p pair in year y (days)
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in y
$SFS_{p,b,y}$	Specific fuel savings for an individual project technology of base year y (mass or volume units/technology*day)
$NCV_{b,fuel}$	Net calorific value of the fuel(s) that is substituted or reduced in volume units)
$f_{NRB,b,y}$	Fractional non-renewability status of woody biomass fuel during biomass, it is the fraction of woody biomass that can be establish This parameter is omitted when f is a fossil fuel.
$EF_{b,f,CO2}$	CO2 emission factor from use of fuel f (tCO_2/TJ)
$EF_{b,f,nonCO2}$	Non-CO2 emission factor arising from use of fuel f, when the ba or charcoal (tCO2e/TJ). This parameter is omitted when f is a fos
$LE_{p,y}$	Leakage for project scenario p in year y (tCO_2e/yr)

CME has submitted the ex-ante emission reduction estimation in a excel sheet/2/. The excel sheet is clear, viewable, non-protected and the calculated values in the sheet are reproducible. Hence, the ex-ante emission reduction calculated for this project is correct.

Findings

CL#06 was raised and closed. Refer Appendix 4 for the details.

Conclusion

The assessment team confirms that

- All assumptions and data used by the CME are listed in the VPA-DDs, including their references and sources;
- All documentation used by CME as the basis for assumptions and source of data is correctly quoted and interpreted in the VPA-DD;
- All values used in the VPA-DD are considered reasonable in the context of the proposed project activity;
- The baseline methodology, AMS-I.E, version 9.0 has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions/SDGs can be replicated using the data and parameter values provided in the VPA-DDs.

D.7. Validity of monitoring plan

Means of validation

The monitoring plan is in compliance with the monitoring methodology TPDDTEC,v4/06/. The VPA was originally included applying CDM Small scale methodology AMSIIG but the RCP is submitted on the TPDDTEC,v4. For the 2nd crediting period, the TPDDTEC,v4/10/ of the updated methodlogy has been applied and the monitoring plan of the same has been adopted.

As per the TPDDTEC,v4methodology/10/, the following parameters will be monitored for all the VPAs:

Parameter/ Relevant SDG Indicator	Unit/Value	Description and source/Justification
$EF_{b,CO2}$ **CO2 emission factor arising from use of fuels in baseline Scenario**	112 tCO_2/TJ	As per the methodology TPDDTEC, v4/10/
$EF_{b,non-CO2}$ **CO2 emission factor arising from use of fuels in project Scenario**	9.46 tCO_2/TJ	As per the methodology TPDDTEC, v4/10/
$EF_{p,CO2}$ CO2 emission factor arising from use of fuels in project Scenario	Fuelwood (Residential): 112 tCO_2/TJ	As per the methodology TPDDTEC, v4/10/
$EFp_{,non-CO2}$ CO_2 emission factor arising from use of fuels in project Scenario	Fuelwood (Residential): 9.46	As per the methodology TPDDTEC, v4/10/
$f_{NRB,i,y}$ Non-renewability status of woody biomass fuel in scenario i during year y	0.76	Assessment based on CDM Methodological tool 30: Calculation of the fraction of non-renewable biomass, Version 04.0/21/ Determined by following the CDM TOOL30, Calculation of the fraction of non-renewable biomass. The fnrb sheet along with the fnrb report was validated and confirmed that the fnrb has been calculated by using the latest version of CDM Tool 30, v4. All steps demonstrated therein. The validation team compared the fnrb with the other registered CDM POAs, VCS Projects and found that the value used by the CME is most conservative among all. The VVB has checked other similar type of registered projects in Uganda as below: (CDM PoA 10610 has fnrb 0.88), CDM PoA 10349 fnrb 0.972, CDM PoA 9956 fnrb 0.89, VCS 3045 (fnrb 0.979). Please refer to Appendix 5 for the fnrb assessment.

	Pb,y Quantity of fuel that is consumed in project scenario p during year y	Fuel wood :0.0114 (Capped at 0.95tonnes/capita/year)	Baseline survey/16/ was conducted at the time of renewal and the value will be fixed ex-ante for subsequent issuance conducted and value is fixed ex-ante for subsequent issuance. The values were assessed in the KPT results and also confirmed with the acceptance sampling test during the remote audits.
	Pp,y Quantity of fuel that is consumed in project scenario p during year y	The actual value will be determined based on the Kitchen Performance Test to be carried out in accordance with applied methodology RECH.4	Compliance with the general requirements for sampling (Section 4.4), general requirements for QA/QC (Section 4.5) and Annex 2 Kitchen performance test. If the values resulting from the baseline KPTs are higher than the following threshold value (on equivalent terms), then the results shall be further substantiated by independent third-party studies that are specific to the project region, including but not limited to government publications, peer-reviewed literature, third party assessments (for example – WISDOM, FAO, UN and similar organizations) and/or official data or statistics about cooking technologies and fuel use. In any case, the value applied shall not be higher than the cap value (on equivalent terms). Threshold value: 0.75 tonnes/person*year of fuelwood Cap value: 0.95 tonnes/person*year of fuelwood
	Up,y Weighted average usage rate in project scenario p during year y	Qualitative (to be monitored)	Ex-post monitoring and surveys will determine the number of appliances still in operation by field survey. CME will follow the “requirement and guidelines of usage rate monitoring" for the estimation of the usage rate of the implemented cookstoves.

			Compliance with GS usage survey guidelines and monitoring requirement version 2.0.
	NCV_b & NCV_p Net calorific value of the non-renewable biomass briquettes or charcoal used in baseline and project project devices respectively	0.0156 TJ/tonne	De-fault value has been applied from the methodology AMS I.E version 09/06/ and found consistent. Same fuel is baseline and project activity thereforethe value will remain same.
	$N_{p,b,y}$ Number of project technology-days included in the project database for baseline b/project p pair in year y	Qualitative (to be monitored) 4,088,000 days/year (Used for ex-ante Ers)	The total number of appliances deployed during period y is tracked in the Project Database of the specific VPA, which is updated regularly. All appliances distributed will be recorded. Any appliance not recorded in the Project Database will not be credited for emission reductions.
	$HHS_{ProjectHHSProject}$ Average household savings due to decrease in expenditure on basic services due to adoption of project technology/measures SDG 1: No Poverty	Qualitative (to be monitored) UGX/month 50,000 for ex-ante calcultation	Actual value will be determined via ex-post monitoring over a sample of project ICS users using a survey questionnaire
	SDG 5: Gender Equality $HHTS_{Project}$ Average time saving associated with cooking time and fuel collection in project	Qualitative (to be monitored) hr/HH/day 2 (For ex-ante)	Actual value will be determined via ex-post monitoring over a sample of project ICS users using a survey questionnaire.
	$HHB_{Project}$ Number of beneficiaries household under Project SDG 7: Affordable and Clean Energy	Qualitative (to be monitored) Number of beneficiaries household under Project 22,000 (For ex-ante)	Actual value will be determined via ex-post monitoring over a sample of project ICS users using a survey questionnaire
	$ACS_{Project}$ Access to affordable and clean energy (% of operating ICS units under Project) **SDG 7: Affordable and Clean Energy**	Qualitative (to be monitored) Number of beneficiaries household under Project (For ex-ante 90%)	Actual value will be determined via ex-post monitoring over a sample of project ICS users using a survey questionnaire
	$EECT_{Project}$ Total number of employees by	Qualitative (to be monitored)	HR records/ Sales and marketing records

	employment contract and employment type (Number of person (male and female) hired under Project)	25 (For ex-ante)	
	$FC_{HHProject}$ Average fuel consumption per HH in Project SDG 15: Life on Land	tonnes/year/HH 2.30 (For ex-ante)	Actual value will be determined via ex-post monitoring over a sample of project ICS users using a survey questionnaire and calculated based on the formula provided in the VPA DDs.
Findings	CAR 02 was raised and successfully closed. Refer to appendix 4 for further details.		
Conclusion	The monitoring plan provided in the VPA-DD is in line with applied methodology TPDDTEC., version 4.0. From the verification of the monitoring procedure provided in the VPA-DDs, validation team could conclude that the CME is able to implement the monitoring plan.		

D.8. Crediting period

Means of validation	As verified from the VPA-DDs/14/, the start date of 2nd crediting period for this VPA is from 05/01/2025 to 04/01/2030 with the length of 5years.
Findings	Nil
Conclusion	The start date of 2nd crediting period is next date of the end date of 1st crediting period and hence, it is acceptable.

D.9. CME and project participants

Means of validation	As per the registered PoA-DD/12/ and previous VPA-DDs, the CME and parties involved in the VPA were: **CME** / **Party** UpEnergy Group / N/A UpEnergy Uganda Ltd. (Project Participant & VPA Implementer) / N/A As per submitted VPA-DDs/14/, the CME and parties involved in the VPA are same as stated above. Also, Validation team confirms that the name of the CME in the updated VPA-DDs /14/ is consistent with the names of the CME in the latest version of the POA DD available on the GS registry. There is no change in CME and PP from the previous crediting period.
Findings	No findings raised.
Conclusion	Validation team confirm that the name of the CME in the updated VPA-DDs /01/ is consistent with the name of the CME in the latest version POA DD available on the GS registry/19/.

D.10. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents[7]	N	N	N
Corrections	N	N	N

[7] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

Changes to the start date of the crediting period of component project activity	N	N	N
Inclusion of monitoring plan	N	N	N
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, standardized baselines, or other methodological regulatory documents	Y	N (Assessment is part of this report)	N (Assessment is part of this report)
Changes to the project design	Y	N (Assessment is part of this report)	N (Assessment is part of this report)
Changes specific to afforestation and reforestation activities			
Others (please specify)	N	N	N

D.10.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.10.2. Corrections

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.10.3. Changes to the start date of the crediting period

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.10.4. Inclusion of a monitoring plan

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.10.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	There are no material impact on the project's monitoring plan due to the proposed design change. The requirements pertaining to the updated methodology TPDDTEC, v4/10/ has been updated by the CME. CME has revised the monitoring plan in accordance with the updated methodology TPDDTEC, v4/10/ in the VPA DDs. The nomencleature of the parameters and equations are updated by the CME and assessed correct by the validation team.
Findings	Nil
Conclusion	The validation team confirms that: a) The changes in the revised PoA-DD are a complete and accurate reflection of the updated version of methodology. b) The actual changes comply with the relevant requirements of para 285 in the project standard related to changes to the project design of PoA. c) Revised PoA DD/12/ meets the eligibility criteria of applied methodology TPDDTEC, v4/10/. The level of accuracy of monitoring is not affected by the proposed changes.

D.10.6. Changes to the project design in the PoA Framework

Means of validation	➢ **Impact on Additionality** The renewal of the crediting period includes change in applied methodology from AMS-II.G v.5 to Reduced Emissions from Cooking and Heating: TPDDTEC v.4 in the VPAs and the same has been treated as the design change in the POA. No new stove models have been added at this stage of design change. However, if a new stove model is introduced during the project's crediting period, its technical specification and performance certificate for the efficiency of the ICS submitted to the VVB for verification. TPDDTEC, v 4/10/ has no impact on the additionality as the POA is located in the LDC i.e. Uganda and the technology falls under the POA in the positive list of Annex of GS Community Services Activities Requirements. ➢ **Impact on Applicability of methodology and other methodological regulatory documents with which the project activity has been certified** The applicability with respect to the TPDDTEC, v4 has been updated in the POA DD. The technologies covered under the POA are in compliance with the GS methodlogy TPDDTEC, v4 and the CME has demonstrated the compliance in the POA DD submitted for the PRC. The detailed applicability will be demistarted in each real case VPAs. ➢ ***Compliance with the monitoring plan of the applied methodology*** There are no material impact on the project's monitoring plan due to the proposed design change. The requirements pertaining to the updated methodology TPDDTEC, v4/10/ has been updated by the CME. Revised the monitoring plan in accordance with the updated methodology TPDDTEC, v4. The nomencleature of the parameters and equaitions are updated by the CME and assessed correct by the validation team. ➢ **Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan.** Revised the monitoring plan in accordance with the updated methodology TPDDTEC, v4 will be part of the VPA DDs. The nomencleature of the parameters and equaitions are updated by the CME and assessed correct by the validation team in the real case VPA DDs submitted. ➢ **Stakeholder consultation** Stakeholder consulatation is not required as the technology included in the POA framework has not been changed. ➢ ***Sustainable development criteria*** Sustainable development criteria is not changed as the technology included in the POA framework has not been changed. ➢ **Safeguarding assessment** Safeguarding assessment criteria is not changed as the technology included in the POA framework has not been changed.

	➢ **Compliance with applicable legislation** The POA is in compliance with all national regulataions the same has been demonstrated in the POA DD and the VPA DDs submitted for the RCP. There is no mandated government programme or policy in host country of this project ensuring the distribution of domestic fuel-efficient cookstoves. The project is not mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework. The assessment team has been checked through search of any laws which are mandated to install efficient electric cooking device is Uganda and found that there are no any such mandated laws for implementation of project activity. A review is made on Uganda environmental laws and regulations/29/30/34/ has been carried and found that there is no mandatory legal requirement for installation of efficient electric cooking devices in households/ institutions of Uganda. Further the following rules/regulations have also referred: a) The National Environment Act, 2019/29/ b) The National Environmental (Audit) Regulations, 2020/27/ c) The National Environment (Environmental and Social Assessment) Regulations, 2020/27/ d) National Environment Action Plan (NEAP) and National Environment Management Policy (NEMP) of 1994/30/ Hence there is no mandatory legal requirement for installation of improved cookstoves in households/institutions of Uganda. Also, CME, manufacturer, distributor and household owners are interviewed during audit and confirmed that this project activity is voluntary and not mandated by any laws. Validation team has assessed aforementioned regulations to confirm that the PoA and VPAs are not part of any regulatory compliances.
Findings	CL#01 & CL#02 were raised and closed satisfactorily.
Conclusion	Validation team concludes that all above changes incorporated by the CME are in accordance with the latest version of applied methodology TPDDTEC, v4/10/. The VVB confirms the following: • The proposed or actual changes comply with the relevant requirements in the Project standard related to changes to the registered programme design of a registered GS PoA. • The proposed revisions comply with the applied methodology and applied tools. • The additionality and the scale of the PoA will not be affected by the changes. • All the changes have been clearly stated in the appropriate sections revised PoA DD and summarized under Appendix 2 of the revised PoA DD/VPA DDs.

SECTION E. Safeguarding Principles Assessment

CME has done the safeguarding principles assessment analysis and presented assessment in the Gold standard VPA-DD. The assessment has been performed in accordance to requirements prescribed in the GS4GG Principles & Requirements, Version 1.2 & Safeguarding Principles & Requirements, Version 1.2/1/./2/.

Validation team has carried out Microsoft teams interviews and remote auditing to cross check the safeguarding principle assessment conducted by the CME. GS VVB has also reviewed the initial GS local stakeholder consultation report and GS4GG VPA-DD and found that the CME has assessed all the required critical safeguarding principle of United Nations in project activity. It has been found that the VPA fulfills all the principles like Human Rights, Labor standards, environment protection, and anti-corruption.
The detailed assessment of safeguarding principle is provided below, however, it shall be noted that the VPA has been already implemented and registered:

Safeguarding principles	**Assessment**
Human Rights	As mentioned by CME through interviews, the project doesn't involve any activity that affects human right but promotes the human rights to have access to clean energy and environment. The project shall not discriminate any people to have ICS rather it enhances the participation and inclusion. Hence validation team concludes the project will not harm the human rights.
Gender equality and Women's Rights	CME confirms project enhances the women's access and entitlement of benefits. Since the women will be direct user of the improved cook stoves, it will benefit women by reducing their exposure to the indoor air pollution thereby improving their health. In addition, the replacement of firewood after the installation of ICS will reduce workload of women for the collection of firewood. Reduced workload for firewood collection results in time saving that the women can use for other productive activities. The project shall make every effort to include landless people in its design. Benefits from the project is expected to culminate in form of creation of entrepreneurial opportunities. While the focus is on capacitating women to take advantage of the entrepreneurial opportunity, the project shall not deprive men from the families of minority groups or the landless people to take advantage of the capacity building activities CME confirmed that both the women and men will be equally considered in the participation of the project. Without any discrimination, both will be equally trained on the maintenance and to the use of cookstoves. The CME has previously implemented similar projects and from checking the implementation and operation of those projects, it can be confirmed that the CME has not discriminated man and women in any activity. The stakeholder consultation documents also verified and found that there is no discrimination in the consultation. The CME also confirmed that CME will take into account gender roles and the abilities of women or men to benefit from the Project's activities. The GS VPA provides opportunities to women to participate in the project activities and also the CME will provide training to the women in the new technology. Hence the project will make the women more competent and hence it will help in reducing the discrimination against women. Also, the GS VPA does not limit women's ability to use, develop and protect natural resources. The project will enhance social participation and decision-making role of women. Moreover, the women are expected to develop entrepreneurial skills which will enable them economically to deal with the household problems. The potential of the project to enable women economically will help reduce discrimination against women rather than deepening it. The CME clarified during the interviewes is found to be appropriate for this VPA context. Hence validation team concludes it does not lead to any gender-based discrimination in this VPA and also it will not harm any women's right.

Community Health, Safety and Working Conditions	As checked, the project leads to safe working condition and improvement in health. Emission reduction and reduction on indoor air pollution is one of the key benefits of the project for community that will improve the health of those communities. Hence, validation team conclude that the project will avoid community exposure to increased health risks and will not adversely affect the health of the workers and the community.
Sites of Cultural and Historical Heritage	As checked, the project will not involve sites Cultural and Historical Heritage. Hence, validation team concludes that there is no risk on cultural heritage or land tenure rights by the VPA.
Forced Eviction and Displacement	Being a household technology, the project shall not involve any activity for involuntary relocation of people.
Land Tenure and Other Rights	As checked, the project will not involve anything related to removal of sites, objects or structures of cultural significance. Therefore, the safeguarding principle under discussion will not be triggered by the project. Hence, validation team concludes that there is no risk on land tenure rights by the VPA.
Indigenous people	As checked, the project will provide additional support to indigenous people.
Corruption	The project is guided by the CME's subsidy policy and duly followed the set quality standard. Quality assurance and quality control is an integral part of the project implementation ensuring the quality throughout the project cycle. There is no corruption provision in the project activity and hence the project will not complicit in corruption.
Labour Rights	The project is guided by the government's subsidy policy and duly followed the set quality standard. Quality assurance and quality control is an integral part of the project implementation ensuring the quality throughout the project cycle. There is no child labour in the project activity and hence the project will not complicit in child labour.
Negative Economic Consequences	The project units are simple and have less moving parts. So, it requires less repair and maintenance. Hence the operational cost is less in comparison to the energy access and the additional benefits that it offers. So, the project implemented is sustainable financially and has positive economic impacts by offering the time saving, ease in cleaning the utensils, reducing health risk and indoor air pollution etc. This has no any negative economic impacts. Hence, validation team confirms there are no negative economic impacts due to the implementation and operation of the project activity.
Emissions	The project will reduce the use of non-renewable biomass as verified by the assessment team. The baseline of the project is the use of non renewable biomass for cooking in inefficient stoves. So, this project will reduce the GHG over the baseline scenario.
Energy Supply	The project will not use any fuel resources that provides for other local users. It uses the charcoal. Therefore, the safeguarding principle under discussion will not be triggered by the project.
Impact on natural water patterns and flow	The project requires very less water to make the slurry that can be fetched at household level itself. Therefore, the safeguarding principle under discussion will not be triggered by the project.
Erosion and/or water body stability	The project units are installed at household level which will not directly or indirectly cause additional erosion or disrupt the water body as claimed by CME. Therefore, the safeguarding principle under discussion will not be triggered by the project.
Landscape Modification and Soil	The project is distribution of improved cook stoves. It therefore does not involve production of crops neither will it lead to soil degradation. Hence the project does not alter soil quality.
Vulnerability to Natural Disaster	The project units are household-based units and are less susceptible to the natural disasters. Hence validation team conclude that the project activity does not lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.
Genetic Resources	The project is distribution of improved cook stoves and therefore, is not linked to any activity related to genetic resources.
Release of pollutants	The project is energy efficiency cook stove project therefore it results in less pollutioin than the baseline.

Hazardous and Non-hazardous Waste	Project does not involve in hazardous material production, trade or release.
Pesticides & Fertilizers	The project is an improved cookstove project that does not use pesticides nor fertilizers.
Harvesting of Forests	The project does not involve in harvesting of project. Hence, validation team confirms the project will not have any adverse impact over forests.
Food	Though the project activity and its boundary does not involve the food production, crop regime alteration or export or economic incentives, the bi-product of the project increases the productivity.
Animal Husbandry	The project does not involve any activity that requires animal husbandry as confirmed by the validation team.
High Conservation Value Areas and Critical Habitats	As checked, the project technologies are household technologies and will not have any impacts on identified habitat and have no adverse impact on biodiversity.
Endangered Species	As checked, the project technologies are household technologies and do not lead to the adverse impact on endangered, vulnerable or critically endangered species.

The VVB has checked the justification along-with the references as provided in Appendix 1 of the VPA-DD and found them to be appropriate. The validation approach didn't reveal any situation that could lead to the violation of safeguarding principles and VVB has confirmed that the project activity fulfils all the safeguarding principles given by United Nations.

Findings: No findings raised.

Opinion:

All supporting information & reference sources stated in the GS4GG VPA-DD in order to support the assessment have been verified by the validation team & confirmed the assessment has been carried out based on accurate information. All of the Safeguarding Principles were evaluated and assessed as low risk. Hence no mitigation measures proposed.

SECTION F. Estimated Sustainable Development Contributions

The follwong SDG outcomes were validated per VPA by the valdation team and the SDG calculator was assessed correctly filled by the CME.

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACTS	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
13 Climate Action (mandatory)	Amount of GHGs emissions avoided or sequestered	22,620	tCO_2e (GSVERs)
1 No Poverty	**Indicator:** Average household savings due to decrease in expenditure on basic service due to adoption of project technology/measures	50,000	UGX/month
5 Gender Equality	**Indicator:** Average time saving associated with cooking time and fuel collection	2	hr/HH/day
7 Affordable and Clean Energy	**Indicator**: Number of beneficiaries household under the project	22,000	Number
7 Affordable and Clean Energy	**Indicator:** % users reporting an operational ICS in project	90	%
8 Decent Work and Economic Growth	**Indicator:** Total number of Jobs	25	Number

15 Life on Land	**Indicator:** Total non-renewable wood fuel saved	1.88	Tonnes /HH/year

SECTION G. Internal quality control

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The validation report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by 4KES are duly followed and the validation report/opinion is reached in an objective manner and complies with the applicable CDM requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The independent technical reviewer(s) may approve or reject the draft validation report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submit final report to Gold Standard. The final approval decision is taken by the Head of the VVB/Director.

SECTION H. Validation opinion

>>4K Earth Science Private Limited' has been contracted by 'UpEnergy Group ' to perform a validation of RCP of the GS registered VAPs titled below:

VPA Ref. no.	**Title**
GS 10911	Up Energy Improved Cookstoves Programme, Uganda - CPA No 013
GS 10912	Up Energy Improved Cookstoves Programme, Uganda - CPA No 014
GS 10913	Up Energy Improved Cookstoves Programme, Uganda - CPA No 015
GS 10914	Up Energy Improved Cookstoves Programme, Uganda - CPA No 016
GS 10915	Up Energy Improved Cookstoves Programme, Uganda - CPA No 017
GS 10916	Up Energy Improved Cookstoves Programme, Uganda - CPA No 018
GS 10917	Up Energy Improved Cookstoves Programme, Uganda - CPA No 019
GS 10918	Up Energy Improved Cookstoves Programme, Uganda - CPA No 020
GS 10919	Up Energy Improved Cookstoves Programme, Uganda - CPA No 021
GS 10920	Up Energy Improved Cookstoves Programme, Uganda - CPA No 022
GS 10921	Up Energy Improved Cookstoves Programme, Uganda - CPA No 023

under the PoA "Up Energy Improved Cookstoves Programme, Uganda" (GS10898) for renewal of crediting period.

The report is based on the assessment of the revised POA design document, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and GS decisions. This report summarizes the findings from the validation of the POA DD/12/ of the project, performed based on GS4GG criteria for POAs and included an assessment of:
The validation was performed in accordance with the Gold Standard requirements /1/, latest version of Validation and Verification Standard/4/ and related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring, and reporting..

The report is also based on the assessment of the voluntary project activity design documents (VPA-DDs), application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools and GS4GG guidance. This report summarizes the findings from the validation of the updated VPA-DDs of the VPAs, performed on the basis of GS4GG requirements and included an assessment of:

a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period at the time of requesting renewal of crediting period;
b) The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions from the applicable crediting period. This validation opinion is also to be seen in conjunction with the validation report at the time of requesting registration for the first crediting period. The Validation Opinion is not meant to provide any consultancy towards the CME. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

This VPAs will replace conventional biomass stoves, with higher efficiency ICS efficient biomass stoves to residential users by leveraging resources provided by the PoA. The baseline stoves are “3 stone / traditional firewood / traditional charcoal stoves”. The CME confirms that this VPA will only dissemnate ICS to residential biomass users who would otherwise use baseline traditional stoves.

The summary of Ex-ante ERs corresponding to each VPA is tabulated below:

VPA Ref. no.	**Annual emission reductions or removals (tCO_2e)**
GS 10911	22,620
GS 10912	22,620
GS 10913	22,620
GS 10914	22,620
GS 10915	22,620
GS 10916	22,620
GS 10917	22,620
GS 10918	22,620
GS 10919	22,620
GS 10920	22,620
GS 10921	22,620

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CH_4	Methane
CL	Clarification request
CM	Combined Margin
CME	Coordinating/Managing Entity
CO_2	Carbon dioxide
CPA	Component Project Activity
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
4KES	4K Earth Science Private Limited
PDD	Project Design Document
PE	Project Emissions
PoA	Program of Activities
PoA-DD	Program of Activities Design Document
PP	Project Participant
PRC	Post registration change
PS	Project Standard
PCP	Project Cycle Procedure
RCP	Renewal of Crediting period
QA/QC	Quality Assurance/Quality Control
tCO_{2e}	Tonnes of CO_2 equivalents
T&C	Technical & Certification
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Sanjay Kandari**					
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.*					
Appointed to work as:							
		CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**
Appointed		Yes	Yes	Yes	Yes	Yes	No
Appointed Date		25-03-2023					
Authorized to work as Technical Expert for:							
Authorized Technical Area		**Sectoral Scope**		**TA Code**	**Technical Area within the scope**		
		Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
		Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
		Energy distribution		2.1	Energy distribution		
		Energy demand		3.1	Energy demand		
		Waste handling and disposal		13.1	Solid waste and wastewater		
		Waste handling and disposal		13.2	Manure		
Authorized to work as Local Expert for:							
Country/Countries		India					
Compliance check by: Anand S. R.							

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Ma Paa Puratchikkanal**					
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.*					
Appointed to work as:							
		CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**
Appointed		Yes	Yes	Yes	Yes	Yes	Yes
Appointed Date		15-07-2023					
Authorized to work as Technical Expert for:							
\Authorized Technical Area		**Sectoral Scope**		**TA Code**	**Technical Area within the scope**		
		Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
		Energy industries (renewable - / non-renewable sources)		1.2	Renewables		

	Energy demand	3.1	Energy demand
	Construction	6.1	Construction
	Waste handling and disposal	13.1	Solid waste and wastewater
	Waste handling and disposal	13.2	Manure
	Agriculture	15.1	Agriculture

Authorized to work as Local Expert for:	
Country/Countries	India
Compliance check by: Anand S. R.	

Certificate of Competence

Name	☒ Mr. ☐ Ms.	**Aziz Wakibi**
Qualification Procedure		Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.

Appointed to work as:

	Validator /Verifier	**Team Leader**	**Trainee**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	**Approver**
Appointed	No	No	No	Yes	No	No	No
Appointed Date	15-07-2023						

Authorized to work as Technical Expert for:

Authorized Technical Area	**Sectoral Scope**	**TA Code**	**Technical Area within the scope**
	Energy demand	3.1	Energy Demand

Authorized to work as Local Expert for:

Country/Countries	Uganda

Compliance check by:	Anand S R

Appendix 3. Documents reviewed or referenced

S.NO	AUTHOR	TITLE	REFERENCE TO THE DOCUMENT	PROVIDER
1.	Gold Standard	Principles and Requirements	Version 1.2	Publicly available
2.	Gold Standard	Stakeholder consultation and engagement requirements	Version 2.1	14/06/2022
3.	Gold Standard	Safeguarding principles & requirements	Version 2.1	Publicly available
4.	Gold Standard	Validation and verification standard	Version 1.0	Publicly available
5.	Gold Standard	Site visit and remote audit requirements and procedures	Version 2.0	Publicly available
6.	Gold Standard	Validation & verification body requirements	Version 2.0	Publicly available
7.	Gold Standard	Community services activity requirements	Version 1.2	Publicly available
8.	Gold Standard	Gold standard eligible impact quantification methodologies	Version 2.4	Publicly available
9.	Gold Standard	SDG Impact Tool	Version 1.3	Publicly available
10.	Gold Standard	REDUCED EMISSIONS FROM COOKING AND HEATING: Technologies and Practices to Displace Decentralized Thermal Energy Consumption' (TPDDTEC)	Version 4.0	Publicly available
11.	CME	Initial PoA DD	Version 03, dated 11/11/2024	CME
12.	CME	Final PoA DD (With design change)	Version 5.0, dated 24/01/2025	CME
13.	CME	Initial VPA DD	Version 5, dated 11/11/2024	CME
14.	CME	Final VPA DD	Version 7, dated 24/01/2025	CME
15.	CME	ER spreadsheet	Corrosponding to Version 7, dated 24/01/2025 of VPA DDs	CME
16.	CME	Baseline Survey and Kitchen Performance Test Report Uganda	Dated 13/11/2024	CME

17.	UNFCCC	Sampling and surveys for CDM project activities and programmes of activities	Version 09.0	Publicly Available
18.	CME	Technical specifications of the ICS covered by the VPAs	-	Upenergy
19.	UNFCCC	- CDM VVS for PoAs - CDM PS for POAs	Version 03	Publicly Available
20.	UNFCCC	CDM Tool 11 “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”	(Version 03.0.1	Publicly Available
21.	UNFCCC	CDM tool 30: Calculation of the fraction of non-renewable biomass,	Version 04.0	Publicly Available
22.	CME	- Sample benificiery agreements for carbon waivers - Warranty Cards of 18 Benificeiaries	-	CME
23.	CME	Declaration for no ODA funding and double counting		CME
24.	Ministry of Energy and Mineral Development, Uganda	The Renewable Energy Policy for Uganda by Ministry of Energy and Mineral Development, Uganda	https://s3-eu-west-1.amazonaws.com/s3.sourceafrica.net/documents/118159/Uganda-Renewable-Energy-Policy.pdf	Publicly available
25.	International Energy Agency	Africa Energy Outlook 2019 by International Energy Agency	https://iea.blob.core.windows.net/assets/2f7b6170-d616-4dd7-a7caa65a3a332fc1/Africa_Energy_Outlook_2019.pdf	Publicly available
26.	Modern Energy Cooking Services	Uganda’s cooking energy sector: A Review by Modern Energy Cooking Service (MECS)	dated May 2022	Publicly available
27.	FAO	The National Environment (Environmental and Social Assessment) Regulations, 2020.	https://www.fao.org/faolex/results/details/es/c/LEX-FAOC203439/	

28.	Government Policy	National Environment Action Plan (NEAP) and National Environment Management Policy (NEMP) of 1994		
29.	Government Policy	The National Environment Act, 2019	https://www.nema.go.ug/projects/national-environment-act-2019	
30.	Government Policy	National Environment Action Plan (NEAP) and National Environment Management Policy (NEMP) of 1994	-	Publicly available

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

Table 1. CL from this validation

CL ID	01	**Section no.**	D.3	**Date:** 19/11/2024
Description of CL				
1. The change in the methodology and inclusion of new stove models under the POA framework is a design change, this change can be clubbed with RCP but it has to be reported as design change in Appendix of POA DD. Also clarify why the LSC is not required for this change. Refer the DESIGN CHANGE REQUIREMENTS in this context. 2. CME shall clarify whether any FAR from previous performance reviews of the POA to be addressed during the RCP. While clarifying kindly submit the GS				
CME response				**Date:** 25/11/2024
1. The PD has updated the VPA-DD and mentioned the change in methodology in Appendix 4 of the VPA-DD. Furthermore, the PD would like to clarify that the design change does not involve an increase in capacity or an expansion into new geographic locations, as no new stove models are added under the VPA-DD. Therefore, no additional Local Stakeholder Consultation was required. This is in compliance with the Design Change Requirements, version 1.1. 2. No FAR was raised during last design reviews change.				
Documentation provided by CME				
1. Design Renewal Review document.				
DOE assessment				**Date:** 25/11/2024
1. The PD has updated the VPA-DD mentioning the change in methodology in Appendix 4 of the VPA-DD. PD clarified that the design change does not involve an increase in capacity or an expansion into new geographic locations, as no new stove models are added under the VPA-DD. Therefore, no additional Local Stakeholder Consultation was required. This is in compliance with the Design Change Requirements, version 1.1. The clarification is accepted based on the revisions undertaken in the updated VPA DDs. Finding is closed now. 2. PD clarified that no FAR was raised during last design reviews change, which has to be addressed during the RCP. Finding is closed now.				

CL ID	02	**Section no.**	D.4	**Date :** 19/11/2024
Description of CL				
1. CME shall clarify how the VPAs complies with CDM Tool 11 i.e. “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”. Please demonstrate the compliance? 2. Table for the gases included in project boundary under section B.3 of VPA DD is not consistent with the TPDDTEC, v4. CME shall use the same table which is provided in the in the methodology?				
CME response				**Date:** 25/11/2024
1. The CME would like to clarify that there is no change in the baseline scenario during this renewal and design change. The original baseline of conventional biomass cookstoves has remained the same in this crediting period. The programme involves the dissemination of improved biomass cookstoves (ICS) in Uganda. Through the distribution of ICS, the VPA replaces existing, less efficient traditional cooking stoves that use biomass for cooking. According to Sections 1.4 and 2.2 of the “Assessment of the Validity of the Original/Current Baseline and Update of the Baseline at the Renewal of the Crediting Period (Version 3)”, if a project requires renewal and the baseline was established only at the start of the crediting period (and not updated during the period), all relevant data and parameters must be revised as outlined in Section 1.4. Additionally, a new baseline assessment must be conducted. Therefore, a new baseline study was conducted to comply with the requirement. All the data and parameter has been revised as per the latest IPCC value and Baseline study results and the new baseline study report has been submitted to the VVB. A stepwise approach to establish baseline has been demonstrated in the section B.4 of VPA DDs, which is in compliance with CDM Tool 11 i.e. “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”.				

2. CME has updated the table for the gases included in project boundary under section B3 of VPA DD and had made it in line with the TPDDTEC, v4.
Documentation provided by CME
1. VPA-DD version 5
DOE assessment **Date:** 25/11/2024
1. The compliance of tool 11 has been included in the updates VPA DDs by the CME, the compliance was reviewed by the validation team and found that the up-dation in the baseline ex-ante parameters have been taken into consideration adequately. The finding is closed now. 2. CME has updated the table for the gases included in project boundary under section B3 of VPA DD and had made it in line with the TPDDTEC, v4. The updated VPA DDs have been assessed correct. Finding is closed now.

CL ID	03	**Section no.**	D.4	**Date :** 19/11/2024
Description of CL				
1. CME shall submit the baseline survey reports/survey firms to the validation team. Kindly also indicate on which dates the surveys were undertaken. 2. KPT sheet along with the survey forms used by the surveyors shall be submitted to the validation team, the compliance of KPT shall be demonstrated as per the latest KUT guidelines. PP shall clarify how the weight of charcoal was undertaken, kindly provide the details of the weighing scale along with it's calibration status. 3. How the confidence/precession test was undertaken for the KPT? Or the outlier analysis had been undertaken. The reproduceable sheets shall be submitted to the validation team. 4. The terminology/nomenclature for the baseline charcoal consumption is not consistent with the TPDDTEC in the context of revised methodology. PP shall use the consistent terminologies.				
CME response				**Date:** 25/11/2024
1. CME has already submitted the baseline survey reports to the VVB. The baseline survey forms have been submitted to the VVB alongside this response. The surveys were conducted in August and September of 2024, as outlined in Section B.4, 'Establishment and Description of Baseline Scenario,' of the VPA DD. 2. CME is submitting the KPT survey forms and KPT sheet to the VVB alongside with this submission. The Kitchen Performance Test was conducted over four consecutive days, with enumerators visiting the household each day to assess the charcoal consumption of the stove. On the first day, a specific amount of charcoal was measured and allocated for consumption. On the second day, the enumerator visited the household at the same time and measured the remaining charcoal to determine usage for Day 1, i.e., (charcoal allocated on Day 1 – remaining charcoal on Day 2). The remaining charcoal, along with any additional charcoal added on Day 2, was then recorded and accounted for. On Day 3, the enumerator again visited the household, measured the remaining charcoal, and calculated charcoal consumption for Day 2 using the formula: ((Remaining charcoal from Day 1 + charcoal added on Day 2) – remaining charcoal on Day 3). On Day 4, the remaining charcoal was once again measured and recorded, and charcoal consumption for Day 3 was calculated as ((Remaining charcoal on Day 2 + charcoal added on Day 3) – remaining charcoal on Day 4). The weight of the charcoal was measured using weighing machines, photographs of the weighing machines used in the survey, along with their calibration reports, are submitted along with this response. 3. CME has conducted reliability check with 90/10 confidence/precession and outlier analysis to the KPT values in accordance to "Sampling and surveys for CDM project activities and programmes of activities version 8". KPT sheets and baseline survey forms are submitted to the VVB along with this response 4. PP has updated the terminology/nomenclature for the baseline charcoal consumption and made it consistent with the TPDDTEC methodology v.4				
Documentation provided by CME				
1. Baseline survey forms. 2. KPT survey forms. 3. Photograph during conducting KPT and calibration reports of weigh scale. 4. VPA-DD version 5.				
DOE assessment				**Date:** 25/11/2024

1. The updated baseline surveys to comply with the CDM Tool 11 and the GS VVS have been submitted to validation team, the appropriateness of the report was validated by interviewing the baseline survey samples as part of the acceptance sampling. The revised baseline scenario has been adequately reported in the updated VPAs, finding is closed now.
2. The methodology of the baseline KPT has been clarified in the response by the CME and the same was also validated as part of the acceptance sampling to the HHs wherein the KPT was undertaken. The finding is closed based on the evidence shared with the validation team and the information collected during the remote onsite assessment. Finding is closed now,
3. PP has updated the terminology/nomenclature for the baseline charcoal consumption and made it consistent with the TPDDTEC methodology v.4 in the revised VPA DDs submitted to the validation team. Finding is closed now.

CL ID	04	**Section no.**	D.4	**Date :** 19/11/2024
Description of CL				

Even the project is auto additional the demonstration of Ongoing Financial Need is mandatory. Please refer the GS PAR & POA Requirements.

POA Requirement has below conditions:

8.9.7 | Design Certification Renewal follows the same process as Validation/ inclusion and Design Review (Design Certification) though the scope of assessment is limited to:

a. Changes in the PoA/VPAs as related to the General Eligibility Criteria
b. Incorporation of any relevant updates to the Gold Standard Requirements
c. Re-definition of baseline scenario and any impact of change on the eligibility principles, criteria and requirements
d. Any Gold Standard activity, product and methodology-specific requirements
e. Demonstration of Ongoing Financial Need, where relevant – see Ongoing Financial Need

The GS Principle & Requirements has following requirement:

4.1.52 Ongoing Financial Need shall be demonstrated at Design Certification Renewal. The project shall provide a qualitative narrative,

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supported by an overview of project finances, that demonstrates how the finance derived Gold Standard Certification is material to the ongoing sustainability of the Project. The narrative may include, but not limited to the following;

(a) Information highlighting the key categories and amounts or relative proportions (%) of project income and outgoings, including the relative proportion of certification related cost and revenue.

CME response	**Date:** 25/11/2024

1. The CME would like to clarify that the project renewal represents a continuation of VPA 10911. The project will involve the installation of new Improved Cookstoves (ICS) in Uganda at subsidized rates, aimed at addressing climate change and reducing emissions from conventional charcoal stoves. Through the VPA, the dissemination of ICS will replace existing, inefficient traditional cooking stoves that use charcoal for cooking. Each VPA under the programme will contribute to the project's objectives of reducing fuel consumption, improving health outcomes, and mitigating deforestation in Uganda.
   The cookstoves are distributed at subsidized rates, and the costs for distribution, maintenance, and overall project management are high and have no external funding. Carbon finance is therefore crucial to keep the project running. Emission reductions certified by the Gold Standard will provide the funds needed for operations and registry costs, helping the project continue and fight climate change while helping the communities.

   To confirm that the project has no other financial support, ODA Declaration has submitted to the VVB. The same has been added in the version 5 of VPA DD.

Documentation provided by CME

1. ODA Declaration
2. VPA-DD version 5

DOE assessment	**Date:** 25/11/2024

CME clarified that the project renewal represents a continuation of VPA 10911. The project will involve the installation of new Improved Cookstoves (ICS) in Uganda at subsidized rates, aimed at addressing climate change and reducing emissions from conventional charcoal stoves. Through the VPA, the dissemination of ICS will replace existing, inefficient traditional cooking stoves that use charcoal for cooking. Each VPA under the programme will contribute to the project's objectives of reducing fuel consumption, improving health outcomes, and mitigating deforestation in Uganda.
The cookstoves are distributed at subsidized rates, and the costs for distribution, maintenance, and overall project management are high and have no external funding. Carbon finance is therefore crucial to keep the project running. Emission reductions certified by the Gold Standard will provide the funds needed for operations and registry costs, helping the project continue and fight climate change while helping the communities. The clarification assessed reasonable in terms of the ongoing financial needs of the VPAs. Finding is closed now.

CL ID	05	Section no.	D.6	Date : 19/11/2024
Description of CL				
Equation 1 used for the ER calculation in section B.6.1 of the VPA DD is not aligned with the methodology. The methodology has following formula, so CME shall double check: **Method 1. Baseline and project fuel(s) are identical and emission reductions are exclusively from improved efficiency** 3.10.3 |This method is applicable to the **projects of all scales**. 3.10.4 |When the baseline fuel and the project fuel are the same, the GHG emissions reduction achieved by the project activity in year y shall be calculated as follows: $ER_y = \sum_{b,p}(N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,fuel} \times (f_{NRB,b,y} \times EF_{b,f,CO2} + EF_{b,f,nonCO2})) - \sum LE_{p,y}$ Eq. 1 Where:				
CME response				**Date:** 25/11/2024
1. CME has made the correction in section B.6.1 of VPA-DD and had made it in line with the applied methodology.				
Documentation provided by CME				
1. Updated version of VPA-DD.				
DOE assessment				**Date:** 25/11/2024
CME has made the correction in section B.6.1 of VPA-DD and had made it in line with the applied methodology, the revised VPA DDs assessed correct by the validation team. Finding is closed now.				

CL ID	06	Section no.	D.6	Date : 19/11/2024
Description of CL				
CDM Tool 30 Version 4 is the latest version in contrast to version 03 used by the CME for calculation of Fnrb, PP shall update and demonstrate the compliance with each of the requirements as per version 4. A reproducible fnrb spreadsheet shall also be submitted to the validation of the appropriateness of calculated fnrb.				
CME response				**Date:** 25/11/2024
CME would like to clarify that the fNRB has been calculated in accordance with the requirements and compliance of CDM Tool 30, version 4. Due to a typographical error, it was written as version 3 in section B.6.2 of the VPA-DD. CME has made the correction in VPA-DD and is submitting the updated VPA-DD along with this response. Additionally, CME is also submitting the fNRB calculation sheet for validation of appropriateness.				
Documentation provided by CME				
1. File of fNRB calculation sheet Uganda.				
DOE assessment				**Date:** 25/11/2024
The fnrb calculation has been submitted to the validation team, the same has been assessed correctly complying the requirements of CDM Tool 30, v4. Finding is closed based on the evidence shared the VVB.				

CL ID	07	Section no.	D.8	Date : 19/11/2024
Description of CL				
1. The value of the monitored parameter $P_{p,y}$ used for the ex-ante determination shall be explained. The source is not sufficiently clear to the validation team. 2. Monitored parameter Up,y shall be subjected to the GS usage survey guidelines and monitoring requirements of level A, B &C. The criteria shall be included in the VPA DDs. 3. Sampling Methodology provide dunder the section B.7.2 of the VPA DD is not clear with respect to the formula for mean and proportion parameters. There is only one formula in the sampling plan, kindly clarify how the formulas used for mean and proportion parameters shall comply the CDM sampling guidelines.				
CME response				**Date:** 25/11/2024
1. The value of $P_{p,y}$ is based on the last verified monitoring (Monitoring 6th) of same projects (GS10911 to GS10921). The last monitoring showed a fuel-saving rate of 53.3% in the project scenario. To remain conservative, the CME has assumed a 45% fuel saving for the project scenario in this renewed				

crediting period. This results in estimated fuel consumption of about 0.0067tonnes/HH/day, compared to the baseline value of 0.01145 tonnes/HH/day. This value is used only for ex ante estimation of ERs and will be monitored as per the monitoring plan provided in the VPA-DD. 2. CME has updated the Up,y parameter in section B.7.1 'Data and parameters to be monitored' of the VPA-DD and made it in line with GS usage survey guidelines and monitoring requirements. 3. CME has updated the section B.7.2 of the VPA DD and made the formula for mean and proportion parameters in line with the "Guideline-Sampling and Surveys for CDM project activities and programmes of activities Version 4". During this project activity CME will use Stratified Random Sampling to select samples for monitoring parameters.
Documentation provided by CME
1. Updated VPA-DD.
DOE assessment **Date:** 25/11/2024
1. CME responded that $P_{p,y}$ is based on the last verified monitoring (Monitoring 6th) of same projects (GS10911 to GS10921). The last monitoring showed a fuel-saving rate of 53.3% in the project scenario. To remain conservative, the CME has assumed a 45% fuel saving for the project scenario in this renewed crediting period. This results in estimated fuel consumption of about 0.0067tonnes/HH/day, compared to the baseline value of 0.01145 tonnes/HH/day. This value is used only for ex ante estimation of ERs and will be monitored as per the monitoring plan provided in the VPA-DD. The clarification is accepted to the validation team. Finding is closed now. 2. CME has updated the Up,y parameter in section B.7.1 'Data and parameters to be monitored' of the VPA-DD and made it in line with GS usage survey guidelines and monitoring requirements. The revised VPA DDs have included the reference of GS usage survey guidelines, finding is closed now. 3. CME has updated the section B.7.2 of the VPA DDs and made the formula for mean and proportion parameters in line with the "Guideline-Sampling and Surveys for CDM project activities and programmes of activities Version 4" categorically specifying the parameters. CME also clarified that this project activity CME will use Stratified Random Sampling to select samples for monitoring parameters. Finding is closed based on the review of the revisions undertaken by the CME in the updated VPA DDs.

Table 1. CAR from this validation

~~**CAR ID**~~	~~xx~~	~~**Section no.**~~		~~**Date:** DD/MM/YYYY~~
~~**Description of CAR**~~				
~~**CME response**~~				~~**Date:** DD/MM/YYYY~~
~~**Documentation provided by CME**~~				
~~**DOE assessment**~~				~~**Date:** DD/MM/YYYY~~

Table 2. FAR from this validation

~~**FAR ID**~~	~~xx~~	~~**Section no.**~~		~~**Date:** DD/MM/YYYY~~
~~**Description of FAR**~~				
~~**CME response**~~				~~**Date:** DD/MM/YYYY~~
~~**Documentation provided by CME**~~				
~~**DOE assessment**~~				~~**Date:** DD/MM/YYYY~~

Appendix 5. Fnrb Assessment

Determining H			
Parameter	**Value (t)**	**H + Value (t) after inclusion of BEF (Calculated as Roundwood (t) x BEF = above ground biomass (t))**	**Source of Data**
sawn wood	28,57,000	**67,13,950**	Refer reference 6 in Fnrb sheet Page 159 The data source validated in the fnrb sheet as correctly referred. The compliance with CDM tool 30, v4 was validated.
Poles-Construction	14,09,000	**33,11,150**	
For Fuelwood-Household	3,06,50,795	3,06,50,795	
For Fuelwood-Commercial	39,13,000	39,13,000	
For Fuelwood-Industrial	25,09,000	25,09,000	
For Charcoal	1,54,89,041	1,54,89,041	
Total	**5,68,27,836**	**6,25,86,936**	
Biomass Expansion Factor (Dimensionless)	**2.35**		Reference 8, Page 3.178 Fnrb sheet The data source validated in the fnrb sheet as correctly referred. The compliance with CDM tool 30, v4 was validated.

Determining RB										
Land Category	**Forest and Other Lands**	**Area (ha)**	**Source of data**	**Protected Area**	**Area (ha)**	**Source of Data**	**$MAI_{forest,i}$**	***t/ha/yr***	**Source of data**	**RB (t)**

Natural Forest	$F_{forest,natural\ forest}$	**19,23,838**	Reference 3, Page 5 and 6. (Refer Fnrb sheet)	$P_{forest,natural\ forest}$	1,57,221	Reference 11, Page 53	$MAI_{forest,natural\ forest}$	0.50	Table 4.1.2. IPCC, 2019, Reference 12	8,83,309
Wood Land	$F_{forest,wooded\ land}$	**32,82,880**		$P_{forest,plantations}$	2,68,285		$MAI_{forest,wooded\ land}$	0.90		27,13,136
Plantations	$F_{forest,plantations}$	**4,55,317**		$P_{other,natural,}$	37,210		$MAI_{forest,plantations}$	7.95		33,23,954
Bushland+Grassland	$F_{other,bushland+grassland}$	**32,82,880**		$P_{other,bushland+grassland}$	2,68,285		$MAI_{other,bushland+grassland}$	0.90		27,13,136
Agricultural Land	$F_{other,agricultural\ land}$	**1,05,30,820**	Reference 6, Page 159 (Refer Fnrb sheet)	$P_{other,agriculture\ land,}$	0		$MAI_{other,agriculture\ land,}$	0.47	Table 5.1. IPCC, 2019, Reference 13	49,49,485
RB (t/year)										**1,45,83,019**

Determining NRB	
H (t)	**6,25,86,936**
RB (t)	**1,45,83,019**
NRB (t)	**4,80,03,917**
fNRB	
76%	

The VVB has checked other similar type of registered projects in Uganda as below:
(CDM PoA 10610 has fnrb 0.88), CDM PoA 10349 fnrb 0.972, CDM PoA 9956 fnrb 0.89, VCS 3045 (fnrb 0.979).

Document information

Version	*Date*	*Description*
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for programmes of activities" (CDM-EB93-A08-STAN); • Make editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the "CDM validation and verification standard for programme of activities" (version 01.0). Change form symbol from CDM-CPA-RCP-FORM to CDM-CPA-RCPV-FORM.
01.0	3 August 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Renewal of crediting period Keywords: component project activity, crediting period, validation report		