




**Validation report form for renewal of CDM programme of activities period
(Version 03.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION	
Title and UNFCCC reference number of the programme of activities (PoA)	Distribution of fuel-efficient improved cooking stoves in Nigeria UNFCCC reference number: 6283
Number and duration of the next PoA period	Number: Second renewal period Duration: 07/11/2019 to 06/11/2026 (including both the days)
Version number of the validation report	024
Completion date of the validation report	1906/047/2021
Version number of PoA-DD to which this report applies	143
Coordinating/managing entity (CME)	C-Quest Capital LLC
Host Parties	Nigeria
Applied methodologies and standardized baselines	AMS II.G, version 11.1, Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass
Mandatory sectoral scopes	3
Conditional sectoral scopes, if applicable	Not applicable
Name and UNFCCC reference number of the DOE	E-0052: Carbon Check (India) Private Ltd.
Name, position and signature of the approver of the validation report	Amit Anand, CEO 

SECTION A. Executive summary

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The CME, C-Quest Capital LLC, has appointed the DOE, Carbon Check (India) Private Ltd., (CC IPL) to perform the validation of the Renewal of the PoA period for the PoA "Distribution of fuel-efficient improved cooking stoves in Nigeria" /B02/.

The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board. The independent Validation by the DOE is required on the PoA-DD /01-b/ to confirm the post registration changes. This report summarises the post registration changes of the project with respect to requirements of CDM VVS for PoAs (version 02.0) /B01-1/. This report contains the findings and resolutions from the validation and a validation opinion.

Scope:

The scope of the validation is defined as an independent and objective review of the revised PoA-DD /01-b/, the baseline, monitoring plan and other relevant documents. The information in these documents is reviewed against the CDM VVS for PoAs (version 02) /B01-1/, CDM PCP for PoAs (version 02) /B01-3/ and CDM PS for PoAs (version 02) /B01-2/

The report is based on the assessment of the PoA-DD /01-b/, 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 CDM decisions.

Purpose, general description and location:

The PoA helps in reducing the emission of greenhouse gases by distribution of the fuel-efficient cook stoves in individual households of Nigeria. The fuel-efficient cook stoves are replacing the non-efficient wood stoves that were being used in the baseline scenario.

Validation methodology and process

The validation has been performed as described in the CDM VVS for PoAs (version 02.0) /B01-1/ and constitutes the following steps:

- Review of the approved revised PoA-DD /B02/
- Review of the revised PoA-DD /01/
- Desk review of relevant documents;
- Interview with representatives of the CME

Conclusion:

The review of the PoA-DD /01-b/ and the subsequent follow-up interviews have provided Carbon Check with sufficient evidence to determine the programme of activity fulfilment of all the stated criteria. In our opinion, the CDM programme of activity meets all applicable UNFCCC requirements for the CDM for renewal of the PoA period.

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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			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader / Validator / Technical Expert	IR	Agarwalla	Sanjay Kumar	CC IPL	X	NA	X	X

B.2. Technical reviewer and approver of the validation report for renewal of PoA period

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	Singh	Vikash Kumar	CC IPL
2.	Approver	IR	Anand	Amit	CC IPL

SECTION C. Means of validation

C.1. Desk/document review

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The validation was performed primarily based on the review of the revised PoA-DD /01/ and the supporting documentation. Documents reviewed or referenced during the validation are listed in Appendix 3 below.

C.2. On-site inspection

No on-site visit was conducted. Validation team has checked the site visit requirements mentioned in the CDM VVS for PoAs, version 02 /B01-1/ and concluded to not conduct a site visit for the validation. Desk review of the submitted revised PoA-DD (version 1~~34~~, dated ~~1306~~047/2021) /01-~~b~~/ and supportive evidences was done by the validation team. Validation team conducted remote interviews with the CME representatives on different topics as mentioned in section C.3 below. Also there is no pre-project information that is relevant to the requirements for renewal of the PoA period and may not be traceable after the renewal.

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

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Goswami	Tridip	C-Quest Capital LLC	13/04/2021	Discussion on the revised PoA-DD and the proposed PRC and RCP including f _{NRB}	Sanjay Kumar Agarwalla

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					and B _{old} calculation	
2.	Verma	Pooja	C-Quest Capital LLC	13/04/2021	Discussion on the revised PoA-DD and the proposed PRC and RCP including f _{NRB} and B _{old} calculation	Sanjay Kumar Agarwalla

C.4. Sampling approach

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Not applicable

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

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Programme of activities	-	-	-
Compliance with PoA-DD form	-	-	-
Programme of activities period	-	-	-
Coordinating/managing entity and the project participants	-	-	-
Post-registration changes	-	-	-
Generic component project activities	-	-	-
Application and selection of methodologies and standardized baselines	-	-	-
Validity of original baseline or its update	-	-	-
Estimated emission reductions or net anthropogenic removals	-	-	-
Validity of monitoring plan	-	-	-
Eligibility criteria for inclusion of CPAs	-	-	-
Others (please specify): <u>UNFCCC I & R check clarification</u>	01-	-	-
Total	<u>01-</u>	-	-

SECTION D. Validation findings

D.1. Programme of activities

D.1.1. Compliance with PoA-DD form

Means of validation	DR, I
Findings	-
Conclusion	<p>CCIPL confirms the following:</p> <ul style="list-style-type: none"> The compliance of the revised PoA-DD /01-b/ (both in track-change and clean versions) with the valid version of the applicable PoA-DD form, version 09.0 including the instructions for completion of the form. This complies to the requirement of §284 of PS for PoAs, version 02 /01-2/ and §390 (a) (i) of VVS for PoAs (version 02.0) /B01-1/. CME has used the latest version of the CDM-PoA-DD form and assessment team confirms that the information transferred to the latest version of the PoA-DD /01-b/ is materially the same as that in the latest revised and approved PoA-DD /B02/. This complies to the requirement of § 381 and §390 (a) (ii) of VVS for PoAs (version 02.0) /B01-1/. <p>The validation team confirms that the requirements of the CDM-PoA-DD FORM /B04/ filling guidelines and VVS for PoAs (version 02.0) /B01-1/ have been appropriately met.</p>

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D.1.2. Programme of activities period

Means of validation	DR, I
Findings	-
Conclusion	As verified from the PoA-DD /01-b/, the start date of 2nd PoA period proposed for this PoA is 07/11/2019 with the length of 7 years i.e. from 07/11/2019 to 06/11/2026. The 2nd PoA period to the PoA commences on the day immediately after the expiration of the 1st PoA period and hence is in compliance with § 390 (a) (v) of VVS for PoAs, version 02 /B01-1/.

D.1.3. Coordinating/managing entity and the project participants

Other coordinating/ managing entity and the project participants										
Means of validation	DR, I									
Findings	-									
Conclusion	<p>The Validation team has checked the names of the coordinating/managing entity and the project participants in the updated PoA-DD along with the project page on UNFCCC website for the PoA 6283 and the latest MoC statement available on UNFCCC web site.</p> <p>As per the updated PoA-DD /01-<u>b</u>/, the coordinating/managing entity, project participants and parties involved in the programme of activities are:</p> <table><tr><th>Parties involved</th><th>Project participants</th><th>Indicate if the Party involved wishes to be considered as project participant (Yes/No)</th></tr><tr><td>Nigeria (host)</td><td>C-Quest Capital LLC (private entity)</td><td>No</td></tr><tr><td>Netherlands</td><td>C-Quest Capital LLC (private entity)</td><td>No</td></tr></table> <p>Hence the names of the coordinating/managing entity and the project participants in the updated PoA-DD /01-<u>b</u>/ are consistent with the names of the coordinating /managing entity and the project participants in the latest version of the MoC statement /B09/ in compliance with § 390 (a) (vi) of VVS for PoAs, version 02 /B01-1/.</p>	Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)	Nigeria (host)	C-Quest Capital LLC (private entity)	No	Netherlands	C-Quest Capital LLC (private entity)	No
Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)								
Nigeria (host)	C-Quest Capital LLC (private entity)	No								
Netherlands	C-Quest Capital LLC (private entity)	No								

D.1.4. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Corrections	Y	024	1906/047/2021
Inclusion of monitoring plan	NA	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	Y	024	1906/047/2021
Changes to the programme design	Y	024	1906/047/2021
Addition of CPA inclusion template	NA	NA	NA
Changes specific to afforestation and reforestation activities	NA	NA	NA
Change of coordinating/managing entity	NA	NA	NA

D.2. Generic component project activities

D.2.1. Application and selection of methodologies and standardized baselines

Means of validation	DR, I
Findings	-
Conclusion	At the time of registration of the PoA-DD, the CME applied the methodology – AMS-II.G, version 03, “Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass”. In the revised PoA-DD /01-b/, valid version of the of this

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methodology has been applied – AMS-II.G, version 11.1, “Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass” /B03/.
The applicability of the methodology is assessed below:

S/N	Applicability conditions of AMS II.G, version 11.1	CME justification	DOE assessment
1	The methodology is applicable to the introduction of single pot or multi pot portable or in-situ cookstoves with rated efficiency of at least 20 per cent.	Cookstoves distributed under the PoA shall have minimum efficiency of 20% as determined in accordance with 'Data/parameter Table 12' of the applied methodology	The defined minimum 20% efficiency of improved cookstove is same as defined in the earlier version of applied methodology AMS.II.G, version 03. Thus, there is no change in minimum efficiency requirement for ICS in the later valid version of the applied methodology AMS.II.G (version 11.1) /B03/. The justification provided CME is acceptable and validation team confirms that project complies with the same.
2	The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	CPAs consisting solely of microscale CDM units as defined by Tool 19, the energy saving of a single ICS shall not exceed the microscale threshold for energy saving per year. For CPAs which do not qualify as consisting of microscale CDM units as defined under paragraphs 12 (a) or (b) of methodological Tool 19, the aggregate energy savings of CPA in any year throughout the crediting period shall not exceed the small-scale threshold of 180 GWh _{th} /year.	In the generic CPA of the revised PoA-DD, it has been confirmed that the CPAs of the PoA will either meet the micro scale threshold at the unit level rather than at the aggregate CPA level or else meet the threshold of small scale. The micro scale CPAs will satisfy paragraph 12 (a) or 12 (b) of Tool 19 and will consist of solely microscale CDM units. Paragraph 15 of the Tool 19 /B08/ states: <i>“If each of the units contained in the CPA satisfies the condition to qualify as a ‘microscale CDM unit’, then the coordinating/managing entity is not required to demonstrate compliance of the CPA with the microscale or small-scale thresholds at the aggregate level of the CPA”.</i>

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			For the CPAs which do not qualify under micro scale, the small scale threshold of energy savings of 180 GWh _{th} /year at aggregate level for each CPA will be applicable. The justification provided by the CME is acceptable and validation team confirms the project complies with this applicability criteria.
3	Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	As demonstrated above (in section I.2 of the PoA-DD), non-renewal biomass has been used in the project region since 31 st December 1989.	The defined non renewable biomass usage in the project region since 31 st December 1989 is same as defined in the earlier AMS.II.G, version 03. Thus, there is no further assessment done for the criterion. The justification provided by CME is acceptable and validation team confirms project complies with the same.
4	For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.	This criterion is not applicable.	This criterion is not applicable for the project.
5	If the project device requires a specific fuel for this device (e.g. briquettes, pellets, woodchips), the consumption of the fuel should be monitored during the crediting period.	This criterion is not applicable.	This criterion is not applicable for the project.
6	The CDM-PoA-DD/CPA-DD shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations (e.g. programme logo).	Each ICS under the PoA shall be identified through an alpha numeric nomenclature to be fixed to the ICS or in form of registration card to be given to the beneficiary. Specific CPA DDs to include explanation on proposed method of distribution of	Validation team has checked the revised PoA-DD and found that CME has defined eligibility criteria number 5 and 7 for double counting check to ensure compliance with this requirement of the applied methodology, AMS.II.G, version 11.1 /B03/. Further, CME

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			project devices including method to avoid double counting.	has mentioned that sample of database shall be made available to the DOE at time of inclusion including the explanation on proposed method of distribution of ICS. The justification provided CME is acceptable and validation team confirms the project complies with this applicability criteria.
7	The CDM-PoA-DD/CPA-DD shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	The stove manufacturers/whole sale providers/ end users shall sign an undertaking stating clearly that the CME or an entity authorized by it shall be the sole owner of the CERs arising from the project.	Validation team has checked the revised PoA-DD /01-b/ and found that CME has defined eligibility criteria number 17 regarding CER Ownership rights to ensure compliance with this requirement of the applied methodology, AMS.II.G, version 11.1 /B03/. The justification provided CME is acceptable and validation team confirms the project complies with this applicability criteria.	

The PoA/Generic CPA part of the PoA-DD, fulfills all relevant criteria of the applied methodology AMS-II.G, version 11.1 /B03/. CME has used the valid version of the applied methodology. However, the applicability criteria will again be demonstrated at the CPA level where the actual project implementation or the distribution of improved cook stoves takes place. Hence the selected version of the applied methodology is appropriate for this PoA/Generic CPA part of the PoA-DD. Hence, the same is in compliance with §385 of VVS for PoAs, version 02 /B01-1/.

D.2.2. Validity of original baseline or its update

Means of validation	DR, I
Findings	-
Conclusion	<p>In accordance to § 382 of CDM VVS for PoAs, version 02.0 /B01-1/, the validation team reviewed the revised PoA-DD /01-b/ to assess the impact of new national and/or sectoral policies and circumstances existing at the time of requesting renewal of PoA period on the modalities to estimate baseline GHG emissions for the subsequent crediting period of each corresponding CPA, without reassessing the baseline scenario.</p> <p>The validation team assessed whether data and parameters used for determining the original baseline, that were determined ex-ante and not monitored during the PoA period and are still valid, and also whether the CME updated such data and parameters in accordance with the "Methodological 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 /B09/.</p> <p>CME has applied and following the steps provided in the above stated Tool 11, for</p>

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demonstration of validity of original baseline. CME has defined the data source for the emission factor, values in line with applied methodology /B03/.

During the 1st PoA period, PoA was registered applying small scale methodology, AMS.II.G. version 03.0. During 2nd renewal period, PoA has applied valid version i.e. 11.1 of the same methodology AMS-II.G /B03/.

Validation team confirms that data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid except the ex-ante parameter which are updated in accordance with applied methodology i.e. AMS.II.G, version 11.1.

Ex-ante Paramter	During 1 st PoA Period	During 2 nd PoA Period
$B_{old,i,j}$ (tonnes/stove/year)	4.21 (Kaduna); 5.1129 (Kano)	5.404
f_{NRB} (fraction)	0.93	0.914
$NCV_{biomass}$ (TJ/tonne)	0.015	0.0156
$EF_{projected_fossilfuel}$ (tCO ₂ /TJ)	81.6	73.2

Values for $NCV_{biomass}$ and $EF_{projected_fossilfuel}$ have been adopted from the the applied methodology, i.e. AMS-II.G, version 11.1 /B03/ and hence deemed acceptable.

CME opted to calculate the f_{NRB} value. The same is acceptable to validation team as it is line with § 49 option a) of the applied methodology AMS-II.G. version 11.1 /B03/ and the applicable methodological Tool 30, version 3.0 /B11/. For calculation of the f_{NRB} value CME has sourced the data from C4 EcoSolutions report, an independent third party study /03/. Validation team has checked the C4 EcoSolutions report /03/ and found that all fuel wood consumption and charcoal consumption values have been sourced for the year 2018 from UN Statistics Division website for the host country, Nigeria /B13/. The derived fuel wood consumption values are in m³ which is converted to tonnes using FAO default conversion factor /B14/. The provided f_{NRB} calculation sheet /04/ and the sourced values have been checked including the calculation procedure in line with the Tool 30 /B11/ and found to be appropriate and deemed acceptable.

CME has calculated the value of $B_{old,i,j}$ using publicaly available historical data for the host country, Nigeria. As per the applied methodology AMS-II.G, version 11.1, for the parameter $B_{old,HH}$, under "Measurement procedures", one of the applicable options is stated as "Based on the historical data or a sample survey conducted as per the latest version of "sampling and surveys for CDM project activities and programme of activities". CME has relied on the historical data source for the share of population using wood for cooking from publicly available report. The data source is from National Bureau of Statistics (operating under the Nigerian Government) in collaboration with World Bank. CME has not conducted sample surveys. The validation team deemed this third party historical data as credible and in line with the applied methodology and hence acceptable. Validation team has checked the provided baseline fuelwood consumption calculation spread sheet /05/ along with all the relevant data source used /B16/ and found inline with § 34 and parameter tables 4 and 5 of the applied methodology AMS-II.G. version 11.1 /B03/. In addition, the validation team was able to successfully reproduce the value of B_{old} based on the input values and the methodology employed. The calculation is found to be appropriate and correct and hence deemed acceptable to the validation team.

The validation team confirms the validity of the baseline has been correctly assessed and the parameters are updated as per the Methodological Tool "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 in the PoA-DD submitted for the renewal of PoA period.

The validation team took cognizance of §287 of PS for PoAs, version 02 /B01-2/ and §382 of VVS for PoAs (version 02.0) /B01-1/.

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D.2.3. Estimated emission reductions or net anthropogenic removals

Means of validation	DR, I
Findings	-
Conclusion	<p>Validation team has checked the modalities for the calculation of the GHG emission reductions in the generic CPA part of the revised PoA-DD /01-b/ in accordance with the applied version of the methodology, i.e. AMS-II.G, version 11.1 /B03/. The parameters and equations presented in the PoA-DD /01-b/ have been compared with the information and requirements presented in the methodology /B03/ and other applicable methodological tools.</p> <p>The validation team confirms that:</p> <ul style="list-style-type: none"> • All assumptions and data used by the CME are listed in the generic CPA part of the PoA-DD /01-b/, including their references and sources; • All documentation used by CME as the basis for assumptions and source of data are correctly quoted and interpreted in the PoA-DD /01-b/; • All values used in the PoA-DD /01-b/ are considered reasonable in the context of the proposed PoA; • The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; • All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD /01-b/. <p>The validation team took cognizance §390 (a) (iv) of VVS for PoAs, version 02.0 /B01-1/.</p>

D.2.4. Validity of monitoring plan

Means of validation	DR, I			
Findings	-			
Conclusion	The monitoring plan in the generic CPA part of the revised PoA-DD /01- <u>b</u> /, is in compliance with the applied methodology AMS- II.G., version 11.1 /B03/. The project was originally registered applying small scale methodology AMS-II.G, version 03. For the 2 nd PoA period, valid version i.e. version 11.1 of the same methodology AMS-II.G has been applied and the monitoring plan of the same has been adopted. CME has adopted the following monitoring parameters in the revised PoA-DD as per the methodology, AMS-II.G, version 11.1:			
	Parameter	Data unit	Description	Monitoring Frequency
	Z	Number	Total number of stoves sold and registered in the Project Database Records	Continuous
	N _{y,i,j}	Number	Number of project devices of type i and batch j operating in a year	Annually/biennially
	μ _y	Fraction	Adjustment to account for any continued use of pre-project devices during the year y for CPAs using B _{old,i,j} for calculation of B _{y,savings}	Annually/biennially
	η _{new,i,j}	Fraction	Efficiency of the device type i and batch j being deployed as part of the project activity	<ul style="list-style-type: none">• Recorded at the time of stove installation/distribution• In the subsequent years after stove installation, the efficiency of project stoves to be estimated annually in accordance with options (b), (c) or (d) under paragraph 37 of the applied methodology.

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			Choice of option to be mentioned in the CPA DD
$B_{y=1,new,i,j,survey}$	Tonnes	Quantity of woody biomass used by project devices in tonnes per device of type <i>i</i> .	Once within first year of project installation
$N_{d,HH}$	Number	Number of project devices distributed per household	Once at the time of CPA implementation
η_{old}	Fraction	Efficiency of pre-project device	Once at the time of CPA implementation
Life Span	Years	The operating life- time of the project device.	Recorded once at the time of CPA implementation
Date of commissioning of batch j	Date	Stoves can be grouped in batches and latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch.	Recorded at the time of commissioning of last stove in a batch
Date of commissioning of project device i	Date	Date of commissioning of individual stove	Recorded at the time of installation or distribution or completion of registration process of an individual stove.
<p>Validation team can confirm that the parameters to be determined ex-post have been presented correctly and according to requirements of the applied methodology AMS-III.G version 11.1 /B03/ and that CME shall be able to monitor and report emission reductions ex-post.</p> <p>Validation team has also checked the sampling plan and found in compliance with the applied methodology /B03/, Standard for sampling and surveys for CDM project activities and programme of activities, version 08.0 /B06/ and Guidelines for sampling and survey for CDM project activities and programme of activities Version 04.0 /B07/.</p>			

D.2.5. Eligibility criteria for inclusion of CPAs

Means of validation	DR, I													
Findings	-													
Conclusion	<table> <tr> <th>No.</th><th>Eligibility criterion – Category</th><th>Eligibility criterion – Required condition</th><th>Supporting evidence for inclusion</th><th>DOE assessment</th></tr> <tr> <td>1</td><td>PoA specific requirement</td><td>Involve the promotion and distribution of ICS by CQC or entities approved and authorised by CQC.</td><td>A clear description of which entity is distributing ICS and model of ICS shall be given on the CPA-DD. If it is an entity approved by CQC, a letter from CQC acknowledging its participation or the agreement between CQC and the entity (covering its</td><td>Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with §124 (i) of the PS for PoAs, v02. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the</td></tr> </table>				No.	Eligibility criterion – Category	Eligibility criterion – Required condition	Supporting evidence for inclusion	DOE assessment	1	PoA specific requirement	Involve the promotion and distribution of ICS by CQC or entities approved and authorised by CQC.	A clear description of which entity is distributing ICS and model of ICS shall be given on the CPA-DD. If it is an entity approved by CQC, a letter from CQC acknowledging its participation or the agreement between CQC and the entity (covering its	Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with §124 (i) of the PS for PoAs, v02. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the
No.	Eligibility criterion – Category	Eligibility criterion – Required condition	Supporting evidence for inclusion	DOE assessment										
1	PoA specific requirement	Involve the promotion and distribution of ICS by CQC or entities approved and authorised by CQC.	A clear description of which entity is distributing ICS and model of ICS shall be given on the CPA-DD. If it is an entity approved by CQC, a letter from CQC acknowledging its participation or the agreement between CQC and the entity (covering its	Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with §124 (i) of the PS for PoAs, v02. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the										

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				participation on the SSC-POA) shall suffice as evidence for this eligibility criterion.	corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA..
2	Geographical Boundary	Is implemented within the geographical boundary Nigeria	<p>The CME/ CPA Implementer shall self-declare that the stoves will only be sold within the geographic confines of Nigeria.</p> <p>This self-declaration shall be provided to DOE at the time of inclusion of the CPA.</p>	<p>According to §124 (a), of the PS for PoAs, v2, the geographical boundary of each CPA, shall be consistent with the geographical boundary set in the PoA. The PoA boundary is set as Nigeria. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>	

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	3	Small Scale threshold	<p>1.If the CPA consists of units which qualify as microscale CDM units, compliance of the CPA with small scale threshold throughout the crediting period is not required as referenced from paragraph 124 (m) of CDM standard for programme of activities; version 02.0</p> <p>2.For small scale CPAs not conforming to paragraphs 12 (a) or (b) of Tool 19, demonstration of adherence to small scale threshold at CPA level to be carried out in accordance with paragraph 124 (m) of PS for PoA.</p>	Calculation of annual energy saving for individual ICS to be submitted to DOE in case of option 1 and aggregate energy saving of CPA in case of option 2.	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements of §124 (g), 124 (m), 124 (n) of the PS for PoAs, v2. The CME has selected to apply either the micro-scale threshold at the unit level rather than at the aggregate level of the CPA or the normal small scale CPA.</p> <p>Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
	4	Additionality	<p>Each CPA will satisfy the criteria for demonstrating additionality by establishing</p> <p>1. That it conforms with either paragraph 12 (a) of Tool 19</p>	<p>The following need to be submitted by CME/CPA implementer</p> <p>(i) ER spreadsheet demonstrating that a single ICS achieves an energy saving of no more than 60 GWhth/yr for</p>	<p>CME has adopted microscale threshold at unit level in the relevant sections of the revised PoA-DD in accordance with the Tool 19, version 09. In case the CPA does not qualify for micro scale (paragraph 12 a or 12 b of Tool 19), , provisions under Tool</p>

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		<p>(v 09)- implemented in LDC/SUZ of host country OR 12 (b) of Tool 19- penetration of project technology being less than or equal to 5% of cookstove technologies in the region. Also, requirements of each unit having an energy saving limit of less than equal to 60 GWhth/yr and end users being households /communities shall apply</p> <p>2. Failing to demonstrate compliance with above mentioned paragraphs, the CPA shall demonstrate additionality using provisions under paragraph 10 (a) of Tool 21 version 13.1.</p>	<p>CPAs comprising of microscale CDM units OR aggregate energy saving of CPA is less than equal to small scale threshold of 180 GWhth/yr for CPAs not comprising of microscale CDM units.</p> <p>(ii)CME/CPA implementer shall clarify the route (Tool 19 Paragraph 12 (a), (b) OR Tool 21) paragraph 10 (a) investment analysis adopted for demonstrating additionality as well as present all documents related to additionality to the validating DOE at the time of CPA inclusion as described in Section C above</p>	<p>21, version 13.1 will be followed to demonstrate additionality at the time of CPA inclusion using para 10 (a), Investment Analysis of Tool 21. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements of §124 (g), 124 (m), 124 (n) of the PS for PoAs, v2. in the case in which CPA consists solely of units that qualify as "microscale CDM units" debundling check is exempted.</p> <p>Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
5	Double Counting check	Has a database describing uniquely	A CPA will have a database that includes the	Validation team confirms that this eligibility criterion has

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		identified and defined households in which ICS have been distributed;	following for each ICS unit: name of the customer, address/ description of location, contact telephone number(s), unique serial number of the stove (including prefacing the serial number with the letters "CQC" or three letters representing the stove model), retailer ID, and date of purchase. Sample of database shall be made available to the DOE at time of inclusion.	been sufficiently set for all CPAs in line with §124 (b) of the PS for PoAs, v2. Validation team based on review PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion—category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
6	Compliance with applicability of methodology	Conditions to ensure compliance with the applicability of the applied methodologies, and other regulatory documents. The CPA should comply with all criteria. These applicability criteria include: (1) the project involves the distribution of energy efficient cooking stoves; (2) these new stoves have an efficiency of no less than 20%; (3) non-renewable biomass has been used as a	Project participants must show evidence of compliance with these eligibility criteria. This would include (1) a description and technical specifications of the improve stove models to be included in the project; (2) the results of a water boiling test indicating that the ICS implemented under the CPA has an efficiency of no less than 20%; and (3) an NRB analysis citing relevant literature showing that non-renewable biomass has been used since Dec.	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (f) and §124 (h) of the PS for PoAs, v2. All CPAs utilizing this generic CPA-DD shall apply and should comply with the small-scale methodology AMS-II.G, version 11.1. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient

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			fuel since 1989 (4) proposed method of distribution (5) define steps to ensure that double counting does not occur.	1989. (4) self-declaration letter enumerating the method of stove distribution and (5) carry out double counting check as stated in eligibility criteria no 5 & 10.	information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
	7	Exclusivity clause	Does not involve households already or covered by any other CPA or CDM project involving the distribution of ICS	Each ICS in each SSC-CPA included in this SSC-PoA will be identified by a unique combination of customer name and geographical location, as well as a unique serial number. The serial number will allow for a clear distinction between the stoves from this SSC-PoA with those of other potential SSC-PoAs. No individual serial number can be in more than one CPA, so it will not be possible for one stove to be counted in two different CPAs. In addition, each CPA will be cross-checked with other CPAs in this SSC-PoA and with CPAs in any other SSC-PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard (GS), and other relevant voluntary schemes to ensure that the	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (c) of the PS for PoAs, v2. All CPAs shall avoid double-registration of CPA (and double counting) by declaration by the CME after checking the UNFCCC homepage. Validation team based on review of PoA-DD /01- b / confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.

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				CPA is not included in any other SSC-PoA, CDM project activity or voluntary project activity. CPA Implementer or CME will review all on-line materials that might be available from the UNFCCC and GS websites, which list every SSC-PoA, CPA and single-project activity to ensure no other projects are covering the households included in this CPA. When possible, the CPA Implementer will try and obtain access to other project developers' databases to cross-check and ensure there is no overlap of households. Given that each stove in this SSC-PoA will have a serial number beginning with "CQC" or three letters representing the stove model, it is extremely unlikely there will be any overlap. All of this information will be summarized in a report and provided to the DOE upon verification.	
8	CPA start date	Be able to provide documentary evidence of the start date.	The start date of the CPA will be when the first stove is sold and registered in the database -- this evidence can be provided to the DOE. Specifically, the registration card or SMS text/	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (e) of the PS for PoAs, v2. The start date of a CPA shall be on or after the PoA start date.	

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				ICT will have the date of purchase, and the DOE can review the database to confirm the earliest date of a sale of a stove.	Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA. Please also refer to the closure of CAR-02.
9	Diversion of ODA fund	Be able to affirm that no funding is coming from Annex I parties. If any public funding is made available from Annex I parties, affirm there is no diversion of Official Development Assistance (ODA);	Self-declaration letters from the CME shall be provided to the validator at time of inclusion asserting that no funding is coming from Annex I parties. If there is funding from an Annex I party, there must be a letter from the funding organization stating that the funding is not a diversion of ODA. If possible, supporting data will be provided to support this assertion, such as the budget for the CPA (stove purchases, marketing/distribution costs) and the amount of financing coming from a private	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per \$35 and \$124 (j) in the PS for PoAs, v02. Validation team based on review of the PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and	

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			source.	comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
10	Double counting check	Is not registered as an individual CDM project activity nor included in another registered SSC-PoA	The CME shall cross-check the CPA with other CPAs in this SSC-PoA and with CPAs in any other SSC-PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard, and other relevant voluntary schemes to ensure that the CPA is not included in any other SSC-PoA, CDM project activity or voluntary project activity. All of this information will be summarized in a report and provided to the DOE upon verification.	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (c) of the PS for PoAs, v2. All CPAs shall avoid double-registration of CPA (and double counting) by declaration by the CME after checking the UNFCCC homepage. Validation team based on review of PoA-DD /01- b / confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
11	PoA related requirement	Is approved by CQC entity prior to its incorporation into the SSC-PoA.	CQC shall confirm (through a letter to the DOE at time of inclusion) that it has approved the incorporation of the CPA into the SSC-POA.	Validation team based on review of PoA-DD /01- b / confirms that the eligibility criterion is defined in accordance with §124 (i) of the PS for PoAs, v02. Furthermore, the eligibility criterion – category, including

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					the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA..
	12	Local stakeholder consultation & environmental analysis	The Local Stakeholder Consultation has been conducted at PoA Level and the EIA process is also performed at PoA level.	CPAs to be included in the present PoA are not required to conduct LSC or environmental analysis as these have been done at PoA level.	<p>As per the PoA DD /01-b/, the local Stakeholder Consultation (LSC) and Environmental Impact Assessment (EIA) are on PoA level. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (i) of the PS for PoAs, v2. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>

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	13	Technology	Is introducing ICS that will have a thermal efficiency of no less than 20%, (using the WBT outlined in AMS IIG. Version 11.1 approved by the CDM Executive). Efficiency of the ICS shall be established by a national standards body or an appropriate certifying agent recognized by it, or alternatively manufacturers' specification shall be used	The model of stove implemented under the CPA shall demonstrate its efficiency according to the Water Boiling Test – as per AMS II.G. v11.1. The CPA is using a stove technology, whose manufacturer specifications are confirmed using a Water Boiling Test.	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements and applicability conditions prescribed by the methodology, as well as §124 (d) including foot note 23 and 24 and 124 (f) of the PS for PoAs, v2. All CPAs shall apply the methodology AMS-II.G., version 11.1. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA. Please also refer to the closure of CAR-09.
	14	Target group	The target group should be defined clearly in the CPA and should be households or communities <u>using fuelwood</u> .	Declaration <u>regarding the target population being domestic fuelwood user</u> by CME/CPA implementer to be submitted to validating DOE.	Validation team confirms that this eligibility criterion shall ensure that all CPAs shall specify the target group for all eligible CPAs in order to confirm to the applied methodology, as well as the PoA stated policy, operational and management framework inline with the requirements of

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				<p>§124 (k) of the PS for PoAs, v2. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
15	Sampling	CPAs shall use Standard for sampling and surveys for project activities and programme of activities, version 08; for surveys <u>as detailed in Section 1.7.2 of this document</u>	Sample size calculation to be submitted to verifying DOE.	Validation team confirms that this eligibility criterion shall ensure that all CPAs in the PoA shall apply to the sampling plan of the PoA. This eligibility criterion is in accordance with AMS-II.G, version 11.1 and “Standard: Sampling and surveys for CDM project activities and programme of activities”, v08. <u>Validation team confirms the sample size calculation (both for the proportion and mean parameters) including the Sampling plan adopted by the CME complies with the Standard: Sampling and surveys for CDM project activities and programme of activities, version 08.</u>

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					Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criterion is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
16	De-bundling check	<p>1. As the generic CPA consists of units which qualify as microscale CDM units, CPAs developed under the present PoA are exempted from performing de-bundling check, as referenced from paragraph 124 (n) of CDM standard for programme of activities; version 02.0</p> <p>2. For small scale CPAs not conforming to paragraphs 12 (a) or (b) of Tool 19, it should be demonstrated that the CPA meets the</p>	Calculation of annual energy saving for individual ICS to be submitted to DOE.	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements of §124 (g), 124 (m), 124 (n) of the PS for PoAs, v2. The CME has selected to apply the micro- scale threshold at the unit level rather than at the aggregate level of the CPA. This means that any number of ICS can be implemented under one CPA. The CME has selected to demonstrate that it consists solely of units that qualify as “microscale CDM units” in order to exempt it from performing debundling check.</p> <p>For the cases when the CPA does not qualify for micro scale threshold at</p>	

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		criteria for not being a de-bundled component of a larger project activity (eg: the debundling rule does not apply if the stove, the independent subsystem, does not exceed 1% of the 180 GWh)		unit level and it is a small scale CPA, in that case CME will demonstrate the debundling criteria as per tool 20. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
17	CER Ownership rights	CPAs must include a mechanism that transfers the ownership rights of CERs from the ICS user to the project participants.	The CPA requires that a warranty card is signed or accepted by the end-user upon purchase or distribution of the stove that states that the PPs have ownership of the carbon assets for the life of the stove.	Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (h) of the PS for PoAs, v2. All CPA utilizing this generic CPA-DD shall apply and should comply with the small-scale methodology AMS-II.G, version 11.1. Validation team based on review of PoA-DD /01-b/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including

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					the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
					<p>The CME has outlined clear and unambiguous eligibility criteria for the inclusion of a CPA under the PoA in section K of the PoA-DD /01-b/. Validation team confirm that the eligibility criteria for inclusion of corresponding CPAs in the PoA are updated by the CME in accordance with the applicable validation requirements related to the renewal of programme of activities period in the VVS for PoAs, version 02 /B01-1/ and the applied methodology AMS-II.G, version 11.1 /B03/.</p> <p>Validation team confirm that the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA. Furthermore, the validation team confirms that eligibility criteria for the inclusion of CPAs in the PoA have covered as per the requirements of §124 of PS for PoAs, version 02 /B01-1/.</p>

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SECTION E. Internal quality control

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The final validation report passed a technical review and quality review before being submitted to the project participant and UNFCCC Executive Board. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification performed the technical review.

SECTION F. Validation opinion

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The CME, C-Quest Capital LLC, has appointed the DOE, Carbon Check (India) Private Ltd., (CCIPL) to perform the validation of the Renewal of the PoA period for the PoA "Distribution of fuel-efficient improved cooking stoves in Nigeria" /B02/.

The validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism, latest version of Validation and Verification Standard and related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The programme of activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change, as stated in the generic CPA-DD. In the opinion of the validation team, the programme of activity meets all relevant UNFCCC, CDM criteria and all relevant host country criteria.

The review of the PoA-DD /01-b/ and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The PoA-DD /01-b/ correctly applies the small scale methodology AMS-

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II.G, version 11.1 /B03/. The monitoring arrangements described in the monitoring plan are feasible within the PoA-DD, and it is validation team's opinion that the CME/CPA Implementer are able to implement the monitoring plan.

In summary, it is validation team's opinion that the CDM programme of activity "Distribution of fuel-efficient improved cooking stoves in Nigeria" (UNFCCC Reference number 6283) meets all relevant UNFCCC requirements for the renewal of the PoA period. Hence CCIPL requests the renewal of CDM programme of activities period.

Appendix 1. Abbreviations

Abbreviations	Full Texts
BE	Baseline Emission
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
CL	Clarification Request
CME	Co-ordinating or Managing Entity
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP/MOP	Conference of Parties/ Meeting of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
GWh	Giga Watt Hours
I	Interview
kW	Kilo Watt
kWh	Kilo Watt Hours
MoV	Means of Verification
MoC	Modalities of Communications
MW	Mega Watt
MWh	Mega Watt Hours
ODA	Official Development Assistance
OSV	On-Site Visit
PE	Project Emission
PoA	Programme of Activities
PoA-DD	Programme of Activities design document
PP	Project Participant
PS	Project Standard
t	Tonne
UNFCCC	United Nations Framework Convention on Climate Change
VT	Validation team
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers



Carbon
CHECK

Carbon Check (India) Private Ltd.

Sanjay Agarwalla

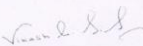
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

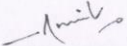
For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Assessor ¹	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input checked="" type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input checked="" type="checkbox"/>	TA 9.2	<input checked="" type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input checked="" type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input checked="" type="checkbox"/>	TA 5.1	<input checked="" type="checkbox"/>	TA 9.1	<input checked="" type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		


 Mr. Vikash Kumar Singh
 Compliance Officer


 Mr. Amit Anand
 CEO

Date of Approval
 24/12/2020

Valid Till
 24/12/2021

Revision History of the Document

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

¹ India

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Carbon Check (India) Private Ltd.

Vikash Kumar Singh

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

For following functions:

Validator ☒ Team Leader ☒ Technical reviewer ☒
 Verifier ☒ Technical Expert ☒ Local Assessor¹ ☒

In the following Technical Areas:

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

Mr. Amit Anand
CEO

Date of Approval
24/12/2020

Valid Till
24/12/2021

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23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

¹ India, South Africa

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Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	CME	a. Initial Revised PoA-DD a.b. Final Revised PoA-DD	Version 13; Dated: 12/04/2021 Version 14: Dated: 06/07/2021	CME
/02/	Carbon Check	Validation Report for PRC of the PoA 6283	Version 024, dated 1906 04/7/2021	CCIPL
/03/	C4 EcoSolutions	Independent report made by C4 EcoSolutions for determining the value of $f_{NRB,y}$	Version 2, dated 06/07/2021	CME
/04/	CME	f_{NRB} calculation worksheet along with the data source	Version 2, dated 06/07/2021	CME
/05/	CME	B_{old} calculation sheet	Version 2, dated 06/07/2021	CME
/06/	CME	Template for Investment analysis	-	CME
/B01/	UNFCCC	1. CDM VVS for PoAs (Version 02.0). 2. CDM PS for PoAs (Version 02.0) 3. CDM PCP for PoAs (Version 02.0)	http://cdm.unfccc.int/	Others
/B02/	UNFCCC	Revised and approved PoA-DD, version 11, 17/01/2017 and the corresponding validation report for the PoA "Distribution of fuel-efficient improved cooking stoves in Nigeria", having UNFCCC Ref. No. 6283	http://cdm.unfccc.int/	Others
/B03/	UNFCCC	AMS-II.G. Energy efficiency measures in thermal applications of non-renewable biomass (version 11.1)	http://cdm.unfccc.int/	Others
/B04/	UNFCCC	Programme design document form for CDM programmes of activities (CDM-PoA-DD-FORM) (Version 09)	http://cdm.unfccc.int/	Others
/B05/	UNFCCC	Glossary of CDM Terms, version 10.0	http://cdm.unfccc.int/	Others
/B06/	UNFCCC	Standard: Sampling and surveys for CDM project activities and programmes of activities (version 08.0)	http://cdm.unfccc.int/	Others
/B07/	UNFCCC	Guideline: Sampling and surveys for CDM project activities and programmes of activities (version 04.0)	http://cdm.unfccc.int/	Others
/B08/	UNFCCC	1. Methodological Tool 19 "Demonstration of additionality of microscale project activities" (version 09.0) 2. Methodological Tool 21 "Demonstration of additionality of smallscale project activities"	http://cdm.unfccc.int/	Others

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		(version 13.1)		
/B09/	UNFCCC	Methodological 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	http://cdm.unfccc.int/	Others
/B10/	UNFCCC	Project page on UNFCCC website for the PoA 6283	http://cdm.unfccc.int/	Others
/B11/	UNFCCC	Methodological Tool 30: "Calculation of the fraction of non-renewable biomass", version 3.0	http://cdm.unfccc.int/	Others
/B12/	UNFCCC	UNFCCC website: https://cdm.unfccc.int/	http://cdm.unfccc.int/	UNFCCC
/B13/	UN Statistics Division website	UN DATA for Nigeria: <ul style="list-style-type: none"> http://data.un.org/Data.aspx?d=EDATA&f=cmlID%3aFW http://data.un.org/Data.aspx?d=EDATA&f=cmlID%3aCH 	-	Others
/B14/	FAO	FAO. <i>Global Forest Resources Assessment</i> . (2015)	-	Others
/B15/	IPCC	IPCC. <i>Guidelines for national greenhouse gas inventories</i> . (2019 refinement to IPCC 2006)	-	Others
/B16/	Various publicly available sources	Bold calculation sheet sourced values: <ul style="list-style-type: none"> Fuel wood consumption 2018: UN Statistics Division website Density of wood: http://www.fao.org/docrep/008/j0926e/j0926e07.htm Population of Nigeria (2018): https://data.worldbank.org/indicator/SP.POP.TOTL?locations=NG Share of population using wood for cooking; Average household size: Nigeria General Household Survey-Panel Wave 4; 2018/19 (Nigerian National Bureau of Statistics) 	-	Others
/B17/	UNFCCC	Rejection ruling note for RCP of PoA 6283: CDM-POA6283-RULE01	http://cdm.unfccc.int/	UNFCCC

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

Table 1. CL from this validation

CL ID	01	Section no.	UNFCCC I & R check clarification	Date: 23/06/2021					
Description of CL									
<p>1: The DOE shall provide information on how it has confirmed that the added eligibility criteria related to sampling requirement complies with "Standard: Sampling and surveys for CDM project activities and programme of activities".</p> <p>2: The DOE shall provide further information how it has validated for the baseline parameter Bold,HH :</p> <p>(a) the revised value of 5.44 Tonnes / household / year which corresponds to an average fuelwood consumption per capita of 0.99 tonnes/year and a household size of 5.5 persons, considering that the fuel wood consumption 2019 (i.e. 182,516,562 m3) applied in the submitted spreadsheet refers to a projected value for year 2019, based on historical values from 2009 to 2018.</p> <p>(b) It is appropriate that the value is ex-ante determined at PoA level and exclusively referring to fuel wood users, whereas the added eligibility criteria related to the target group of the PoA intends to defer a clear definition of the target group at CPA level nor restrict the target group to fuel wood users.</p> <p>(c) The compliance of the survey conducted for estimating the share of population using wood for cooking (i.e. 66%) with the latest version of "sampling and surveys for CDM project activities and programme of activities", as required by page 16 of AMS II.G version 11.1.</p> <p>3: The DOE shall provide further information how it has validated the calculation of ex-ante parameter fNRB (94%), as the total woody biomass consumption in 2018 calculated (i.e. 216,541,375 tonnes/year) is even higher than the total production of 191,076,650 tonnes/year (i.e. 263,554,000 m3 biomass * 0.725 tons/ m3 wood density) as per the same reference referred by the fNRB sheet (i.e. http://data.un.org/Data.aspx?d=EDATA&f=cmlID%3aFW).</p>									
Project participant response				Date: 06/07/2021					
<p>1: The CME has referenced the version of "Standard: Sampling and surveys for CDM project activities and programme of activities" which was valid at the time of project submission for calculation of sample sizes for both proportion and mean parameters. The compliance of calculation with the standard has been demonstrated through assumed values of population, expected proportion, expected mean, standard deviation etc. in Section I.7.2 of the PoA design document.</p> <p>The eligibility criterion on sampling was added as a result of applying the latest version of PoA DD form at the time of PoA period renewal. According to instructions for completing the form, Section K had to be revised to include the following- "Demonstrate the usability of the eligibility criteria for inclusion of CPAs in the PoA by using the table, defining the eligibility criteria in accordance with the project standard, and setting out required conditions for a CPA to be included in the PoA".</p> <p>The CME has not made any changes to the sample size calculation as stated in the original PoA DD. Only the reference of Standard for sampling and surveys as well as sampling guidelines has been updated and instructions for sampling additional parameters ($B_{p=1, new, i, survey} \cdot \mu_p$) that has arisen due to application of valid version of methodology are now included.</p> <p>2 (a): If the latest available value from UN Statistics Division is considered, the total fuelwood consumption in households for year 2018 was 176.585 cubic meters, thousand. Using this value and population of Nigeria in 2018, the per capita fuelwood use calculates to 0.98 tonnes/year (5.40 tons/household/year) which is slightly lower than the 2019 projected figure of 0.99 tons/year (5.44 tons/household/year). Since the PoA period was due for renewal in 2019, hence the CME considered it appropriate to use values which were applicable for the year 2019 applying second order polynomial regression analysis to last 10-year fuelwood consumption data (2009-2018) for arriving at the 2019 projection. Since the Bold calculation using 2018 data is conservative as compared to the 2019 projected value, the CME has revised the Bold value in section I.6.2 to 5.40 t/year as opposed to earlier proposed 5.44 t/year.</p> <p>Bold calculation using 2018 fuelwood consumption data from UN Statistics Division</p> <table border="1"> <thead> <tr> <th>-</th><th>Parameter</th><th>Unit</th><th>Value</th><th>Source</th></tr> </thead> </table>					-	Parameter	Unit	Value	Source
-	Parameter	Unit	Value	Source					

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A	Fuel wood consumption 2018 in cubic meter	m³	17,65,85,000	UN Data [1] UNdata record view Fuelwood
B	Density of wood	tons/ m³	0.725	FAO [2]
C	Fuel wood consumption 2018 in tons	tons	12,80,24,125	Calculated (A*B)
D	Population of Nigeria (2018)	#	19,58,74,740	World Bank[3]
E	Average household size	#	5.500	Nigeria General Household Survey-Panel Wave 4; 2018/19
F	Total number of Households in Nigeria (2018)	#	3,56,13,589	Calculated (E*F)
G	Share of population using wood for cooking	%	66.50%	Nigeria General Household Survey-Panel Wave 4; 2018/19
H	Households using wood for cooking	#	2,36,83,037	Calculated (F*G)
I	Fuelwood consumption per household (Bold)	tons / y	5.400	Calculated (G*H)
J	Per capita consumption	tons / y	0.981818182	Calculated (I/E)

2 (b): The added eligibility criteria number 14- 'Target Group' has now been revised to include the following "The target group should be defined clearly in the CPA and should be households or communities using fuelwood".

2 (c): The value of 66.5% representing population using wood for cooking has been referenced from "LSMS Integrated Surveys on Agriculture Nigeria General Household Survey-Panel Wave 4 2018/2019". This is publicly available report which can be accessed from following official site: Nigeria - General Household Survey, Panel 2018-2019, Wave 4 (worldbank.org).

The CME considered this source as complying with the requirements of historic data as stated in AMS II.G, version 11.1: page 16. (paragraph 23 of General guidelines for SSC CDM methodologies: version 23.1) since it has been carried out by National Bureau of Statistics (NBS) which operates under Federal Government of Nigeria. The World Bank collaborated with NBS for implementing this survey.

3:

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Country or Area	Commodity - Transaction	Year	Unit	Quantity
Nigeria	Fuelwood - Production	2018	Cubic metres, thousand	263,554
Nigeria	Fuelwood - Total energy supply	2018	Cubic metres, thousand	263,554

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Country or Area	Commodity - Transaction	Year	Unit	Quantity
Nigeria	Fuelwood - Final energy consumption	2018	Cubic metres, thousand	206,301
Nigeria	Fuelwood - Final consumption	2018	Cubic metres, thousand	206,301

According to the above Energy statistics data from UN Statistics Division (UNdata | record view | Fuelwood), the total fuelwood production value of 263,554,000 m³ (191,076,650 tonnes) is same as the total energy supply value and greater than the final fuelwood consumption or final energy consumption value of 206,301,000 m³. Thus, it is clear that the total production and consumption values as per this data include only the energy use of fuelwood and does not reflect the non-energy fuelwood component used in Nigeria. But the fNRB tool 30, version 03, requires the CME to estimate the total consumption of woody biomass (H) accounting for all consumption within the applicable area (not only wood fuel but also timber and industrial consumption) hence, the CME had computed the total consumption value used in the present fNRB calculation as 216,541,375 tonnes/year derived from combined consumption of the following values

1. Fuelwood in households
2. Charcoal consumption for household.
3. Fuelwood consumption in manufacturing, construction and non-fuel industry.
4. Charcoal consumption in manufacturing, construction and non-fuel industry.
5. Fuelwood consumption in commerce and public services.
6. Charcoal consumption in commerce and public services.

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7. Transformation in charcoal plants.

The CME had deemed this appropriate as the above represented each of the categories of fuelwood consumption that was required to be accounted by Tool 30-

1. household consumption of fuelwood (HW)

2. commercial woody biomass consumption for energy purposes (CE) and

3. commercial woody biomass consumption for non-energy purposes (NE)

However, taking into consideration the concern raised by CDM team and in absence of clarity on data representing consumption of fuelwood in energy and non-energy applications in Nigeria published by the UN Statistics Division, the CME has now conservatively considered Fuelwood- final consumption data of 206,301,000 m³ (149,568,225 tonnes) as the total woody biomass consumption which includes the household consumption as well as commercial use of fuelwood for energy applications.

This is also in line with fNRB tool according to which "In case national studies or government data do not provide clear information to demonstrate that the values are only for commercial purpose and do not include household consumption, supporting evidence or an official letter of confirmation signed by appropriate government authority should be provided. In the absence of such evidence, the estimation of fuelwood and charcoal for energy applications in commercial sector shall be based on data on consumption estimates and not the supply of fuelwood and charcoal for energy applications"

The non-energy commercial application of fuelwood has been left out of fNRB calculation as from the UN Statistics Division data the exclusive non-energy application of fuelwood value cannot be clearly affirmed leaving room for doubt. Leaving this value out is also more conservative as far as fNRB value is concerned.

The resulting fNRB value now calculates to 0.91 as compared to the previous value of 0.94.

Documentation provided by project participant

Revised PoA-DD

Revised B_{old} calculation sheet

Revised fNRB calculation sheet

Revised fNRB report

DOE assessment

Date: 06/07/2021

1: In the earlier revised and approved PoA-DD version, the eligibility criterion related to sampling (paragraph 124 (b)) was not explicitly mentioned. Hence complying the CDM PS for PoAs, version 02, CME has adopted this as an eligibility criterion in the revised PoA-DD.

Validation team confirms the sample size calculation (both for the proportion and mean parameters) including the Sampling plan adopted by the CME complies with the Standard: Sampling and surveys for CDM project activities and programme of activities, version 08.

2 (a): Apropos to the I & R query raised by UNFCCC, CME has revised the calculation of B_{old} based on latest available data for 2018. The validation team has checked the data source and the calculations and deemed this conservative and acceptable.

2 (b): CME has submitted revised PoA-DD in which eligibility criterion number 14 now clearly states that the target group shall be defined clearly in the CPA and should be households or communities using fuelwood.

2 (c): As per the applied methodology AMS-II.G, version 11.1, for the parameter B_{old,HH}, under "Measurement procedures", one of the applicable options is stated as "Based on the **historical data** or a sample survey conducted as per the latest version of "sampling and surveys for CDM project activities and programme of activities". CME has relied on the historical data source for the share of population using wood for cooking from publicly available report. The data source is from National Bureau of Statistics (operating under the Nigerian Government) in collaboration with World Bank. CME has not conducted sample surveys. The validation team deemed this third party historical data as credible and in line with the applied methodology and hence acceptable.

3: The validation team deemed the above clarification provided by the CME as acceptable. In absence of clarity on data break up for non-energy commercial application, CME has conservatively excluded the data in the calculation of fNRB. This results in a conservative value of fNRB as 0.91 which is deemed acceptable.

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The CL is closed.

Table 2. CAR from this validation

CAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of CAR			
-			
Project participant response			Date: DD/MM/YYYY
-			
Documentation provided by project participant			
-			
DOE assessment			Date: DD/MM/YYYY
-			

Table 3. FAR from this validation

FAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of FAR			
-			
Project participant response			Date: DD/MM/YYYY
-			
Documentation provided by project participant			
-			
DOE assessment			Date: DD/MM/YYYY
-			

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	7 January 2021	Revision to: <ul style="list-style-type: none">• Remove the row of "Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next programme of activities period" from cover page and related instructions;• Make editorial improvements.
02.0	31 May 2019	Revision to: <ul style="list-style-type: none">• Ensure consistency with version 02.0 of the "CDM validation and verification standard for programmes of activities" (CDM-EB93-A08-STAN) and version 02.0 of the "CDM project cycle procedure for programmes of activities" (CDM-EB93-A09-PROC);• Make editorial improvements.
01.0	29 December 2017	Initial publication.

Decision Class: Regulatory

Document Type: Form

Business Function: Renewal of crediting period

Keywords: crediting period, programme of activities, validation report