




**Validation report form for renewal of CDM programme of activities period  
(Version 02.0)**

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

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the programme of activities (PoA)</b>	PoA for the Reduction of emission from non-renewable fuel from cooking at household level – UNFCCC No. 7359
<b>Number and duration of the next period</b>	2 <sup>nd</sup> Period - 7-year PoA period from 30/11/2019 to 29/11/2026
<b>Version number of the validation report</b>	02.0
<b>Completion date of the validation report</b>	13/02/2021
<b>Version number of PoA-DD to which this report applies</b>	29
<b>Coordinating/managing entity (CME)</b>	Green Development AS
<b>Host Parties</b>	Ethiopia Kenya Madagascar Malawi Mozambique Nigeria Uganda Zambia Chad Dominic Republic Ivory Coast Liberia Namibia Rwanda Sierra Leone Somalia Ghana South Africa Zimbabwe
<b>Applied methodologies and standardized baselines</b>	AMS I.E - Switch from non-renewable biomass for thermal applications by the user --- Version 10.1 AMS-III.AV - Low greenhouse gas emitting safe drinking water production systems --- Version 8.0 No standardized baseline applied

<b>Mandatory sectoral scopes</b>	Sectoral Scope 1 – Energy industries (renewable/non-renewable sources) Sectoral Scope 3 – Energy demand
<b>Conditional sectoral scopes, if applicable</b>	N/A
<b>Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next programme of activities period</b>	N/A <sup>1</sup>
<b>Name and UNFCCC reference number of the DOE</b>	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032
<b>Name, position and signature of the approver of the validation report</b>	Ms. Carla Debat Molleví <i>Applus+ Certification CDM Product Manager</i>  Signature: 

<sup>1</sup> This is not applicable since the estimated annual average of GHG emission reductions would be defined at specific CPA level.

## SECTION A. Executive summary

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The aim of the “PoA for the Reduction of emission from non-renewable fuel from cooking at household level – UNFCCC No. 7359”<sup>2</sup> is to reduce emissions from household cooking stoves. The use of non-renewable fuel such as wood and charcoal for cooking, leads to the emission of greenhouses gasses, deforestation and poor indoor climate. The programme will use a number of different technologies to reach this goal. The PoA is confirmed to be a voluntary action by *Green Development AS* as the Coordinating/Managing Entity (hereinafter referred to as CME).

The Component Project Activities (hereinafter referred to as CPAs) that are included or to be included in the PoA aim to reduce the demand for wood and charcoal and to contribute to a sustainable development by implementing the following solutions:

- Reduce the need for boiling water for drinking and thus reduce the need for non-renewable fuel for boiling water. This is achieved by providing clean and safe drinking water to participating households. The purified water is provided either through:
  - Water purification system provided at the household level; or
  - Community based water purification system where the households will get the purified water at water stations.
- Provide clean renewable fuel for cooking and thus eliminate the need for non-renewable fuel consumption for cooking. This is done through providing highly efficient stoves that are using renewable fuel. The renewable fuel will be:
  - Denatured alcohol (bio-ethanol).

Each CPA under the proposed PoA will be implemented in a limited geographical area such as a country, county or a district.

Each CPA will include one or several of the technologies included in the PoA depending on the local conditions. Each household may use one single solution or a combination of solutions depending on its needs and local conditions.

The goal of the project is to provide solutions that will reduce GHG emissions, and other negative effects of the use of dirty non-renewable fuel from cooking at a household level.

The significant reduction of smoke from cooking stoves will improve the indoor air quality and greatly improve the health of the participating households. In addition, time will be saved on collecting and carrying non-renewable fuels such as wood and charcoal and on carrying water to the household. Furthermore, the project will reduce the rate of deforestation, which is a major problem in all the countries included in this PoA.

Moreover, aims to provide reduction on financing to terrorist organizations (Production and distribution of Charcoal is the main source of financing for terrorist organizations in Africa. According to a UN report, terrorist organizations and organized crime groups collect informal taxes of charcoal production and sales, equal to 30% of the value of the Charcoal).

### **Validation of RCP Scope:**

LGA Technological Center, S.A., accredited DOE E-0032 (hereinafter referred to as *Applus+ Certification* or just the *DOE*), has been contracted by the PoA's CME *Green Development AS*, to conduct the Validation of Renewal of the PoA Period (RCP) to the registered *PoA 7359 PoA for the Reduction of emission from non-renewable fuel from cooking at household level*.

The scope of the validation process is defined as a third-party independent and objective review of the PoA Design Document (PoA-DD)<sup>15/</sup>, limited to and against the criteria stated in Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodologies AMS-I.E - Switch from non-renewable biomass for thermal applications by the user (Version 10.1)<sup>05/</sup> and AMS-III.AV - Low greenhouse gas-emitting safe drinking water production systems (version 08.0)<sup>06/</sup> the latest version of the

<sup>2</sup> [https://cdm.unfccc.int/ProgrammeOfActivities/poa\\_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view](https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view)

CDM Validation and Verification Standard for Programmes of Activities (VVS for PoAs version 02.0)<sup>/01/</sup>, the latest version of the CDM Project Standard for Programmes of Activities (PS for PoAs version 02.0)<sup>/02/</sup> and the latest version of the CDM Project Cycle Procedure for Programmes of Activities (PCP for PoAs version 02.0)<sup>/03/</sup>, as well as any other related methodological tools, guidelines and other regulatory documents adopted by the CMP or the Board.

The validation is not meant to provide any consulting towards the CME or authorized participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the PoA-DD or its related documents.

### **Validation of RCP Process:**

The programme assessment has been undertaken by the Applus+ Certification's assigned Validation Team using standard auditing techniques to determine whether the programme meets the applicable CDM rules and requirements, including those specified in the CDM Project Standard for Programmes of Activities (PS for PoAs version 02.0)<sup>/02/</sup>, the selected methodologies<sup>/05/,/06/</sup>, the selected standardized baselines (if any) and any other UNFCCC CDM regulatory documents.

The Validation Team has assessed the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the CME and determined whether such information is reliable and credible based on the above mentioned rules and requirements.

Before the Validation begins, the DOE selects and appoints a Validation Team in compliance with the latest version of the CDM Accreditation Standard (CDM AS version 07.0)<sup>/04/</sup> to safeguard the impartiality and with the rules and requirements to perform Validation and Verification-Certification processes.

During the Contract Review stage, the DOE ensures the selected Validation Team covers the Technical Knowledge of the Sectoral Scope/Technical Area applicable to the assessment and the relevant experience and capability to evaluate the information provided by the CME against the aforementioned criteria.

Once the Validation of RCP process has commenced, the members of the Validation Team have carried out the following steps:

1. A Desk Review of the updated PoA-DD<sup>/15/</sup> and related documents.
2. Follow-up interviews with the programme stakeholders.
3. Raise and resolution of outstanding issues (if any) and issuance of a Draft Validation of RCP Report and a Final Validation of RCP Report and Validation of RCP opinion.
4. Technical Review of the prepared report and related documentation by independent technical reviewer(s).
5. Internal quality check by the Applus+ Certification HQ personnel before the final issuance of the definitive set of documents for being submitted to the UNFCCC.

In order to ensure transparency and impartiality all the assumptions and asseverations shall be clear and objective and the evidences serving as a basis for the latter shall be referenced.

Applus+ Certification has checked all the necessary aspects of this validation process by using customized checklists or similar techniques that demonstrate transparently the criteria of the assessment team and the results of the assessment process.

### **Conclusion:**

Applus+ Certification confirms and concludes, based on objective and sufficient evidences, that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 meets all the relevant criteria mentioned above for the request for Renewal of PoA Period of the PoA for the period from 30/11/2019 to 29/11/2026; as defined in the VVS for PoAs version 02.0<sup>/01/</sup>.

Applus+ Certification hence recommends the registration of the Renewal of PoA Period for the PoA-DD under the UNFCCC CDM.

The assessment asseverations that evidence that the proposed request is in compliance with the applicable rules and requirements are set out below within this Validation Report.

**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.	Lead Auditor  Technical Expert (3.1)  Technical Expert in training (1.1)	IR	CALLE	AGUSTÍN	Applus+ Certification	Y	n/a	Y	Y
2.	Auditor (Validation)  Technical Expert (1.1)  Technical Expert (3.1)	OR	AHIRWAR	VIVEK K.	Outsourced Entity (GCEES)	Y	n/a	Y	Y

**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  Technical Expert (1.1 / 3.1)	EI	SHEN	SIMON	Applus+ Certification
2.	Report Approver	IR	DEBAT	CARLA	Applus+ Certification

## SECTION C. Means of validation

### C.1. Desk/document review

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Applus+ Certification has performed a Document Review (Desk Review) taking in consideration:

- A review of presented data and information.
- Cross-checks between the presented data and information provided in the PoA-DD<sup>/15/</sup> and information from other sources, including, but not limited to, the publicly available information in the UNFCCC at the time of assessment performance.
- The sectoral and local expertise of the DOE at the time of reviewing the provided data and information.

The references of the reviewed documentation can be observed under the Appendix 3 of this report.

### C.2. On-site inspection

Duration of on-site inspection: <i>n/a</i>				
No.	Activity performed on-site	Site location	Date	Team member
1.	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

No physical on-site inspection (with presence of the Applus+ Certification's Validation Team) was conducted as part of the performed validation assessment for renewal of programme of activities period.

Based on the calls/interviews, PoA-DD<sup>/15/</sup> review, as well as the review of UNFCCC procedures and guidelines (including the absence of requirements in the VVS for PoAs<sup>/01/</sup> version 02.0 to conduct on-site inspections at the time of renewal of PoA Period), Applus+ Certification's Validation Team has proceeded to skip the site visit. Validation team, in any case, has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of validation:

- By review of PoA-DD<sup>/15/</sup>;
- By taking follow up actions by conducted interviews with authorized participants, to gather information about knowledge of PoA design and current situation, among the other validation requirements, via Skype, telephonic calls and e-mail communications.
- Cross-checked evaluation under the scope of all information and references provided in PoA-DD<sup>/15/</sup>. Details of interviewees, topics covered and additional information presented in the below section "C.3 - Interviews".

Validation team thus has checked there are not site visit requirements mentioned in the VVS for PoAs<sup>/01/</sup> version 02.0 and concluded that no site visit is required at the time of renewal of PoA Period.

Applus+ Certification has used the following methods for the validation of the Renewal of PoA Period on the PoA-DD<sup>/15/</sup> in compliance with the auditing techniques as defined in Section 7.1.3. of the VVS for PoAs<sup>/01/</sup> version 02.0 Paragraphs 28 to 30:

- Skype interviews, calls and communications with the CME representatives.
- Publicly available information of the PoA and the data contained in it.
- Other interactions with the CME representatives (mails and document's sharing).

Applus+ Certification has found the CME representatives to be available and in possession of any knowledge and related evidence that the DOE needs to perform this Validation of Renewal of PoA Period assessment and considers such means of validation enough to ensure the scope of the latter and its compliance with the CDM rules and requirements.

A complete desk review of the submitted PoA-DD<sup>/15/</sup> and supportive evidences have been checked by the Validation team.

In addition, audit team has conducted Skype calls/interviews, telephonic calls and e-mail communications with the authorized participants and any other required parties on different topics as mentioned under section C.3 of this report.

### C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Norstebo	Mr. Havard	Green Development AS	25/10/2019 (initial)  Various intermediate interviews  02/07/2020 (final)	<p>Videoconference interview encompassing the following topics:</p> <ul style="list-style-type: none"> <li>- Implementation and operational status of the PoA and any post-registration change valid for the PoA in the particular context of its renewal of the period.</li> <li>- Meeting of applicability conditions/requirements of the selected CDM baseline and monitoring methodologies<sup>/05/</sup><sup>/06/</sup> and applicable methodological tools<sup>/12/</sup> for the renewal of the PoA period.</li> <li>- Applicable national policies and regulations and their eventual impacts in terms of changing of the previously derived baseline scenario and baseline emissions.</li> <li>- Application of updated and/or eventual new values for ex-ante determined (fixed) parameters in the updated PoA-DD<sup>/15/</sup> (when compared to the</li> </ul>	<p>Mr. Agustín Calle</p> <p>Mr. Vivek K. Ahirwar</p>
2.	Lubanga	Mr. David	Consultant			

					PoA-DD valid for the first 7-year period) and validity of the proposed monitoring plan.	
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#### 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
<b>Programme of activities</b>			
Compliance with PoA-DD form		CAR#3 CAR#4 CAR#6	
Programme of activities period			
Coordinating/managing entity and the project participants		CAR#5	
Post-registration changes	CL#1		
<b>Generic component project activities</b>			
Application and selection of methodologies and standardized baselines	CL#4 CL#5 CL#10 CL#11 CL#12	CAR#2 CAR#7	
Validity of original baseline or its update	CL#2	CAR#1	
Estimated emission reductions or net anthropogenic removals	CL#7 CL#8		
Validity of monitoring plan	CL#6 CL#9		
Eligibility criteria for inclusion of CPAs	CL#3	CAR#8	
Others (please specify): incompleteness raised by UNFCCC		CAR#9	
<b>Total</b>	<b>12</b>	<b>9</b>	<b>0</b>

### SECTION D. Validation findings

#### D.1. Programme of activities

##### D.1.1. Compliance with PoA-DD form

<b>Means of validation</b>	<p>As per PS for PoAs<sup>02/</sup> version 02.0 Paragraph 284 the validation team appointed by Applus+ Certification checked if the CME used the latest valid version of the PoA-DD form for completing the revised PoA-DD<sup>15/</sup>. The CME has used the PoA-DD form version 09.0<sup>13/</sup> for the revised PoA-DD<sup>15/</sup> for the purpose of the Renewal of PoA Period, accordingly with CDM webpage, version 09.0 is the latest version of the template hence found acceptable by the DOE.</p> <p>The CME has sent to the DOE a Clean and tracked changes versions of the revised PoA-DD for its Renewal of PoA Period.</p> <p>The DOE has checked, by comparison between the registered version of the PoA-DD (version 23 dated on 22/08/2019)<sup>15/</sup> and the initial revised version of the new PoA-DD<sup>15/</sup>, its intermediate and final versions<sup>15/</sup> if:</p> <ul style="list-style-type: none"> <li>- The information presented is materially the same as in the registered version of the PoA-DD.</li> <li>- The compliance of the revised PoA-DD with the valid version of the PoA-</li> </ul>
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	<p>DD Form and instructions therein.</p> <p>All the sections of the PoA-DD<sup>/15/</sup> are checked for the compliance with the “Instructions for completing this form” mentioned as attachment to the PoA-DD form version 09.0<sup>/13/</sup>.</p> <p>In accordance to para 390 (a)(i) and (ii) of the VVS for PoAs<sup>/01/</sup> version 02.0 and after the assessment team checking process and closure of related findings, the DOE can confirm that:</p> <ul style="list-style-type: none"> <li>- The revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraphs 378 and 381.</li> <li>- The CME has used the latest available version of the PoA-DD (i.e. version 09.0) template form with all applicable guidance for its completion being sufficiently and appropriately followed hence the assessment can conclude that revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in Paragraph 284 of the PS for PoAs<sup>/02/</sup> (version 02.0).</li> </ul> <p>In summary, the Applus+ Certification’s validation team is able to confirm that information made available in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 is materially the same as in the registered version of the PoA-DD (version 23 dated on 22/08/2019)<sup>/15/</sup> being sufficiently accurate, complete, and provides clear understanding of the CDM programme of activities.</p>
<b>Findings</b>	CAR#3; CAR#4; CAR#6 were raised and closed accordingly. Please refer to Appendix 4 for the detailed description and closure of the findings.
<b>Conclusion</b>	After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs <sup>/01/</sup> version 02.0 Paragraphs 378 and 381.

### D.1.2. Programme of activities period

<b>Means of validation</b>	<p>The DOE through checking the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, in its Section D.1. cross-checking the information with the one available at UNFCCC Website<sup>3</sup> that the Start Date of PoA is well stated and corresponding to 30/11/2012.</p> <p>By same approach and cross-check the DOE confirmed that the duration of PoA in its Section D.2. is consistent with the duration stated in the registered PoA-DD and it is stated as 28 years and 00 months.</p> <p>The Crediting Period Type and Duration in its Section J. (Generic CPA-DD) is consistent as it is a 7 years renewable crediting period starting from 30/11/2019 for this 2<sup>nd</sup> Period of the PoA that commences on the day immediately after the expiration of the current period.</p>
<b>Findings</b>	No findings were raised for this section.
<b>Conclusion</b>	After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs <sup>/01/</sup> version 02.0 Paragraph 390 (a) (v).

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

<b>Means of validation</b>	The DOE through checking the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and cross checking the information with the one stated in the registered MoC forms in the CDM web page confirms the correctness of corporate identity of the CME and all project participants as included in the revised PoA-DD <sup>/15/</sup> version 29 dated
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<sup>3</sup> [https://cdm.unfccc.int/ProgrammeOfActivities/poa\\_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view](https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view)

	<p>on 25/01/2021.</p> <p>The initial MoC form was submitted on 23/10/2017. Subsequent additional communications are registered in the PoA CDM web page were checked and all is found in line with the information provided in the rev revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021.</p> <p>Applus+ Certification confirms that the Coordinating/managing entity in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and the PP's names are consistent with the actual situation.</p> <p>Green Development AS is the Coordinating and Managing Entity (CME) for the project activities under the Programme of Activities (PoA) and will communicate with the CDM Executive Board.</p> <p>Samsung Electronics Co., Ltd. and EcoEye Co., Ltd are listed as PPs for the PoA.</p> <p>Hence, this is found acceptable by the DOE.</p>
<b>Findings</b>	No findings were raised for this section.
<b>Conclusion</b>	After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs <sup>/01/</sup> version 02.0 Paragraph 384.

#### D.1.4. Post-registration changes

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

## D.2. Generic component project activities

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

<b>Means of validation</b>	<p>Through document review and interviews, the assessment team reassessed the applicability of baseline, monitoring methodology and standardized baselines based on the knowledge of the project from the initial validation and the confirmation from the CME/PP. There are no standardized baselines applied for this PoA.</p> <p>As per paragraph 390 (iii) of the VVS for PoAs<sup>/01/</sup> version 02.0, the validation team appointed by Applus+ Certification checked whether CME has used the valid and latest version of the applicable methodologies<sup>/05//06/</sup>, that was previously applied in the PoA-DD valid for the currently expired 1<sup>st</sup> 7-year period and has sufficiently demonstrated the programme design is in line with the applicability conditions for such selected methodology and any other applicable regulatory document.</p> <p>The registered version of the PoA-DD (version 23 dated on 22/08/2019)<sup>/15/</sup> applies the methodology <i>AMS I.E "Switch from non-renewable biomass for thermal applications by the user" version 04.0.</i></p>
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The revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 applies however the following two methodologies:

- AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 10.1<sup>/05/</sup>.
- AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” version 08.0<sup>/06/</sup>.

The initial and intermediate versions of the PoA-DD proposed for renewal, apply different versions of the methodologies listed above, depending on the moment the revised documents have been elaborated, findings raised and addressed, etc. Hence along this document other versions of the applied methodologies may appear indicated in this sense.

The final versions at the time of submission of this request for renewal of PoA Period are the ones listed above, coinciding with the latest applicable and valid versions of the documents, hence found correct.

Has to be noted that the use of two methodologies in this PoA instead of the one primarily used in the registered version, is due to the removal of the water solutions from the methodology AMS-I.E (since its version 08.0) and the creation, for these type of measures, of the methodology AMS-III.A.V (*EB 97 Meeting Report Para 31 (a) (v)*).

The DOE, after communication and confirmation by UNFCCC CDM has considered the inclusion of this new methodology does not suppose a Post-Registration Change (PRC), hence has been found acceptable to proceed with the validation of the PoA Period Renewal without the necessity of a PRC covering the addition of a new methodology.

The DOE finds also acceptable to prepare a single Generic CPA for the inclusion of the technologies/measures proposed in the PoA-DD considering the use of two different methodologies as per the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 79, as the technologies/measures are included in the positive lists for additionality demonstration in the applied tool for the demonstration of additionality at the time of registration of the PoA-DD (given the additionality shall not be reassessed at the time of PoA Period Renewal, this is found acceptable).

The DOE remarks that the use of another methodology other than the single one originally used in the PoA-DD at the time of registration is not due to the addition of new technologies/measures or any component that require the use of an additional methodology at the time of Renewal of PoA Period, but because of the removal of the water treatment technologies from the methodology AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 09.0 (removed since the version 08.0 of the same), the one applied at the time of starting the renewal process, and its inclusion in the methodology AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” as per provisions in *EB 97 Meeting Report Para 31 (a) (v)*.

Additionally, the CME has updated the Eligibility Criteria to include the applicability conditions of the AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” (version 08.0)<sup>/06/</sup> as well as the Eligibility Criteria no.11 preserves the criteria for inclusion of CPAs based on the positive list thresholds for automatic additionality.

Moreover, the DOE has cross-checked the Eligibility Criteria have been separated by technology as requested by the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 79, thus found acceptable and in compliance with that requirement.

Based on the above, the DOE considers not necessary to refer to a more recent version of the tool for the demonstration of additionality for the PoA, in the sense of evaluating if the water treatment technologies are included in the positive list of technologies, hence considers that the Generic CPA-DD falls under the

prescriptions of the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 79, thus there is no need of separate Generic CPA-DDs due to a change of the methodology not controlled or intended by the CME of the PoA.

The CME has identified the project as a small-scale Generic CPA-DD as:

- Type I for the technologies/measures deployed under the methodology AMS-I.E.<sup>/05/</sup>.
- Type II for the technologies/measures deployed under the methodology AMS-III.A.V.<sup>/06/</sup>.

The CME has also incorporated the requirements for the CPAs to be included to comply with such small-scale thresholds in the Eligibility Criteria no.10.

Thus the DOE considers that complies with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 126 and found acceptable the application of small-scale methodologies for this PoA.

Regarding the application of multiple methodologies, the DOE has checked the requirements for such application and considers that the application of multiple methodologies falls under the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 93(a) and considers that the Generic CPA-DD can use the combination of both methodologies.

The CME has identified the presence of potential cross effects and has taken it into account for the determination of the emission reductions as per the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 94(b).

The CME has described how the PoA will prevent cross effects in Section I.3. of the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021.

The CME prevents the appearance of cross effects by preventing the program to claim Emission Reductions from both solutions provided to a households selected for monitoring, even if the households have been provided with two solutions that contribute to Emission Reductions, the PoA will claim only one of them (the one that achieves less ERs, hence conservative). This is found acceptable by the DOE.

The validation team confirmed that the selected methodologies<sup>/05//06/</sup> and all applicable methodological tools<sup>/12/</sup> were correctly considered and applied were corresponding and if needed for the PoA with respect to the following:

- Meeting of applicability conditions/criteria (assessment details included in Appendix 5 of this Validation Report);
- Delineation of project boundary and selection of emission sources and Greenhouse gases (GHGs) (assessment details included below in this Section);
- Baseline identification and its update (assessment details included in Section D.2.2);
- Algorithms and/or formulae used to estimate emission reductions (assessment details included in D.2.3 below);
- Selection and definition of values for ex-ante determined (fixed) parameters (assessment details included in section D.2.2 below);
- Monitoring plan including selection and definition of parameters monitored ex-post and monitoring approaches for such parameters (assessment details included in section D.2.4. below).

Assessment of meeting of applicability conditions/criteria for the selected CDM baseline and monitoring methodologies and applicable methodological tools:

The revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 has been completed in full conformance with the applied methodologies<sup>/05//06/</sup> and applicable methodological tools<sup>/12/</sup> as outlined in the updated document for the 2<sup>nd</sup> PoA period in Section I for the Generic CPA.

All applicability criteria/requirements for the applied methodologies and applicable methodological tools are demonstrated to be sufficiently met. The additional assessment performed by the validation team of how such applicability criteria/requirements are met is summarized in Appendix 5 of this Validation Report.

Assessment of the definition of the project boundary as per the PoA-DD:

The physical boundary for the PoA is the geographical area within which all CDM Component Project Activities (CPAs) included in this PoA will be implemented, taking into consideration the requirements of all applicable national and/or sectoral policies and regulations of each host country within that chosen boundary.

The PoA covers the geographical regions of the following countries.

- Ethiopia
- Kenya
- Madagascar
- Malawi
- Mozambique
- Nigeria
- Uganda
- Zambia
- Chad
- Dominic Republic
- Ivory Coast
- Liberia
- Namibia
- Rwanda
- Sierra Leone
- Somalia
- Ghana
- South Africa
- Zimbabwe

The PoA covers the deployment and installation of the following technologies/measures:

1. Reduce the need for boiling water and hence the need for fuel for this process.

This may be done by providing clean drinking water as an alternative to boiling water. Clean drinking water may be provided by two alternative solutions, depending on the project specific conditions.

- a. Household water purification systems. This may be a membrane-based system, to be installed at household level which may use no energy.

The water purification technology to be installed may consist of the following process

Pouring of water into a raw water container  
 Filtering of the water through a water purification filter  
 Collection of the purified water in a safe drinking water container

Disease-causing bacteria and cysts do not pass through such membranes. Also the concentration of heavy metals and pesticides is significantly reduced.

- b. Community based water purification systems may use filtering technology, where households can buy clean drinking water from a water station. Such solutions require that the households collect purified water to fill up a water container and carry to their home.

The deployed solutions include boreholes with hand pumps. The water is pumped from clean ground water and is filtered for further ensuring that the water meet the required quality for drinking water.

The pumps will use human power, so that there is no emission from the operation of the water purification systems.

The water purification solutions provide clean safe drinking water that meet WHO's interim performance targets on household's water treatment or applicable national standards/guidelines.

The technology deployed, based on local conditions, shall be identified and described at the time of CPA implementation and inclusion and/or shall be described as part of the monitoring process, for each household selected for monitoring.

2. Replace non-renewable fuel with renewable fuel.

This will be done by providing energy efficient ethanol stoves that will use denatured alcohol (bioethanol) which is a renewable fuel.

The income generated from the carbon credits will be used to finance the equipment included in the solutions (water purification facilities and new stoves) and or aftersales support to ensure that the system remain operational.

GHG emission sources included in the project boundary:

All GHG emission sources and gases included in the project boundary are correctly outlined in Section I.4 of the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 as summarized below:

Source		GHG	Included?	Justification/Explanation
Baseline	Source 1 Emission from combusting non-renewable woody biomass.	CO <sub>2</sub>	Included	Main emission source.
		CH <sub>4</sub>	Excluded	Excluded for simplification. The emission source is assumed to be very small.
		N <sub>2</sub> O	Excluded	Excluded for simplification. The emission source is assumed to be very small.
Project activity	Source 1 Emission from combustion of renewable fuel	CO <sub>2</sub>	Excluded	No net CO <sub>2</sub> emission from renewable fuel.
		CH <sub>4</sub>	Excluded	Excluded for simplification. The net emission source is assumed to be very small.
		N <sub>2</sub> O	Excluded	Excluded for simplification. The emission source is assumed to be very small.
	Source 2 Emission from cultivation, use and processing of biomass	CO <sub>2</sub>	Excluded	Excluded as Not Applicable in accordance with AMS I.E
		CH <sub>4</sub>	Excluded	Excluded as Not Applicable in accordance with AMS I.E
		N <sub>2</sub> O	Excluded	Excluded as Not Applicable in accordance with AMS I.E
	Source 3 Emission from fossil fuel combustion	CO <sub>2</sub>	Excluded	Excluded as no fossil fuel combustion in the project scenario under AMS-III.AV
		CH <sub>4</sub>	Excluded	Excluded as no fossil fuel combustion in the project scenario under AMS-III.AV

		N <sub>2</sub> O	Excluded	Excluded as no fossil fuel combustion in the project scenario under AMS-III.AV
	Source 4 Emission from electricity consumption	CO <sub>2</sub>	Excluded	Excluded as no electricity consumption in the project scenario under AMS-III.AV
		CH <sub>4</sub>	Excluded	Excluded as no electricity consumption in the project scenario under AMS-III.AV
		N <sub>2</sub> O	Excluded	Excluded as no electricity consumption in the project scenario under AMS-III.AV
	Source 5 Leakage Emission	CO <sub>2</sub>	Included	A standard adjustment factor of 0.95 has been used in accordance with AMS I.E & AMS-III.AV.
		CH <sub>4</sub>	Excluded	Excluded for simplification. The emission source is assumed to be very small.
		N <sub>2</sub> O	Excluded	Excluded for simplification. The emission source is assumed to be very small.
	<p><u>Conclusion:</u></p> <p>The selected emission sources and GHGs are appropriately justified for the proposed Generic CPA.</p> <p>In summary, the identified project boundary is confirmed by the validation team as being in compliance with the selected methodologies<sup>/05/06/</sup> and applicable regulatory documents. The definition of the project boundary is sufficiently justified in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021.</p> <p>It was also confirmed that all main GHG emission sources, the physical delineation of the CDM PoA, and other relevant project and baseline emission sources covered in the applied regulatory documents are included within the project boundary for the purpose of baseline emissions for the Generic CPA-DD.</p> <p>The approach is considered acceptable by the DOE.</p>			
	<p><b>Findings</b></p> <p>CL#4; CL#5; CL#10; CL#11; CL#12; CAR#2; CAR#7 were raised and closed accordingly.</p> <p>Please refer to Appendix 4 for the detailed description and closure of the findings.</p>			
	<p><b>Conclusion</b></p> <p>After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraph 378 and 390 (iii).</p>			

### D.2.2. Validity of original baseline or its update

<b>Means of validation</b>	In accordance with paragraphs 288-291 of the PS for PoAs <sup>/02/</sup> version 02.0 and paragraph 382 of the VVS for PoAs <sup>/01/</sup> version 02.0, the validation team appointed by Applus+ Certification reviewed the validity of the current baseline scenario for the PoA.
	The baseline scenario is the same as the current practice in accordance with the definitions in the applied baseline and monitoring methodologies <sup>/05/06/</sup> . The baseline scenario is that households use non-renewable woody biomass for cooking and where applicable boil their drinking water.
	Due to the nature of the PoA and its implementation in several different countries

and regions, the CME has chosen to include the Eligibility Criteria no.18 which implies that, at the time of inclusion or renewal of a CPA in the PoA, the validity of the baseline scenario or its update shall be considered and then the assessment done at the time of renewal of CPA Crediting Period against the requirements of methodological tool *“Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”* in its more recent version.

At the time the PoA will conduct the assessment of the validity of the baseline scenario or its update when a CPA intends to be included in a specific host country, as well as when a CPA intends to be renewed under this updated framework, the approach is considered acceptable by the DOE for the evaluation of the national policies and circumstances in the host countries.

Moreover, at the time of the PoA Period Renewal in this revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, the Eligibility Criteria have been updated as well as the parameters depending on potential updates of default/IPCC values have been assessed and found correct by the DOE. These values, as indicated in revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, Section I.6.2 are considered within the PoA boundary, at the PoA level, at the time the rest of the conditions to be evaluated will be done at CPA level as per the EC no.18 (included for both technologies/measures).

Additionally, in line with 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), the CME has, at PoA level, updated the data and parameters determined ex-ante for this PoA Period Renewal.

As per para 291 of the PS for PoAs<sup>/02/</sup> version 02.0, If data and parameters used for determining the original baseline, that were determined ex ante and not monitored during the PoA period, are no longer valid, the coordinating/managing entity shall update such data and parameters.

The application of 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), Step 2.2 is in any case required for this PoA Renewal given the circumstance that the technologies/measures once contained in the same methodology at the time of PoA registration (i.e. AMS-I.E. version 04) have been now split into two different methodologies with their own parameters / nomenclature / requirements. This update is found acceptable by the DOE.

Following ex-ante determined parameters are correctly defined and used for the ex-ante estimation of emission reductions to be achieved by the CPAs within the 2<sup>nd</sup> 7-years PoA period and/or for the determination of baseline and/or project emissions for the PoA along such period:

#### For AMS-I.E\_v10.1

<b>Data / Parameter</b>	$f_{NRB,y}$
<b>Data Unit</b>	Fraction.
<b>Description</b>	Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass.
<b>Source of data</b>	To be determined in CPA
<b>Value(s) applied</b>	To be determined by SSC-CPA.



	Choice of data or Measurement methods and procedures	<p>Paragraph 42 of the methodology provide two choices for how to determine the value <math>f_{NRB,y}</math>.</p> <p>Option (b) will be used, when this is available, option (a) will be used when option (b) is not available.</p> <p>Option (b) use default national values approved by the Board.</p> <p>Option (a) conduct own studies to determine the local <math>f_{NRB}</math> value as per "TOOL30: Calculation of the fraction of non-renewable biomass".</p>																			
	Purpose of data	Calculation of baseline emission																			
	Additional comment	Also defined as $f_i$ in AMS-III.AV version 8.0. If the baseline fuel is fossil fuel, the value to be applied is 1																			
	<b>ASSESSMENT OPINION</b>																				
	<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers the option of each CPA to use either the Option (a) or Option (b) of the Paragraph 42 of the applied methodology..</p> <p>The CME indicates that the parameter <math>f_{NRB,y}</math> is the same as the parameter <math>f_i</math> as specified in the AMS-III.AV version 8.0, which is correct as represent the same value and method for its calculation.</p> <p>This is found acceptable by the DOE.</p>																				
	<table border="1"> <tr> <td>Data / Parameter</td> <td><math>EF_{\text{projected\_fossilfuel},i} / EF_{\text{projected\_fossil fuel}}</math></td> </tr> <tr> <td>Data Unit</td> <td>tCO<sub>2</sub>/TJ.</td> </tr> <tr> <td>Description</td> <td> <p>Emission factor for the substitution of non-renewable woody biomass that is substituted by similar consumers.</p> <p>Emission factor of the fuel type i substituted (t CO<sub>2</sub>/TJ)</p> </td> </tr> <tr> <td>Source of data</td> <td>Project activity site</td> </tr> <tr> <td>Value(s) applied</td> <td>To be determined in SSC-CPA.</td> </tr> <tr> <td>Choice of data or Measurement methods and procedures</td> <td> <p>The Parameter <math>EF_{\text{projected\_fossil fuel}}</math> shall be determined from</p> <p>a) Default value in Table 2 of the applied methodology, or</p> <p>b) Calculated based on the fuel mix using Equation 2 (paragraph 25) of the applied methodology.</p> </td> </tr> <tr> <td>Purpose of data</td> <td>Calculation of baseline emissions.</td> </tr> <tr> <td>Additional comment</td> <td>Not applicable.</td> </tr> <tr> <td colspan="2"><b>ASSESSMENT OPINION</b></td> </tr> <tr> <td colspan="2"> <p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation/default value for each CPA depending on the type of fuel that is going to be substituted.</p> <p>The CME indicates that the parameter <math>EF_{\text{projected\_fossilfuel},i}</math> is the same as the parameter <math>EF_{\text{projected\_fossil fuel}}</math> as specified in the AMS-III.AV version 8.0, which is correct as represent the same value and method for its calculation.</p> <p>This is found acceptable by the DOE.</p> </td> </tr> </table>	Data / Parameter	$EF_{\text{projected\_fossilfuel},i} / EF_{\text{projected\_fossil fuel}}$	Data Unit	tCO <sub>2</sub> /TJ.	Description	<p>Emission factor for the substitution of non-renewable woody biomass that is substituted by similar consumers.</p> <p>Emission factor of the fuel type i substituted (t CO<sub>2</sub>/TJ)</p>	Source of data	Project activity site	Value(s) applied	To be determined in SSC-CPA.	Choice of data or Measurement methods and procedures	<p>The Parameter <math>EF_{\text{projected\_fossil fuel}}</math> shall be determined from</p> <p>a) Default value in Table 2 of the applied methodology, or</p> <p>b) Calculated based on the fuel mix using Equation 2 (paragraph 25) of the applied methodology.</p>	Purpose of data	Calculation of baseline emissions.	Additional comment	Not applicable.	<b>ASSESSMENT OPINION</b>		<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation/default value for each CPA depending on the type of fuel that is going to be substituted.</p> <p>The CME indicates that the parameter <math>EF_{\text{projected\_fossilfuel},i}</math> is the same as the parameter <math>EF_{\text{projected\_fossil fuel}}</math> as specified in the AMS-III.AV version 8.0, which is correct as represent the same value and method for its calculation.</p> <p>This is found acceptable by the DOE.</p>	
Data / Parameter	$EF_{\text{projected\_fossilfuel},i} / EF_{\text{projected\_fossil fuel}}$																				
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	<table border="1"> <tr> <td>Data / Parameter</td> <td><math>NCV_{\text{biomass}}</math></td> </tr> <tr> <td>Data Unit</td> <td>TJ/Tonne</td> </tr> <tr> <td>Description</td> <td>Net Calorific Value of the non-renewable woody biomass</td> </tr> <tr> <td>Source of data</td> <td>Methodology AMS I-E version 10.1, paragraph 23.</td> </tr> <tr> <td>Value(s) applied</td> <td>0.0156</td> </tr> <tr> <td>Choice of data or Measurement methods and procedures</td> <td>Calculation of baseline emissions.</td> </tr> </table>	Data / Parameter	$NCV_{\text{biomass}}$	Data Unit	TJ/Tonne	Description	Net Calorific Value of the non-renewable woody biomass	Source of data	Methodology AMS I-E version 10.1, paragraph 23.	Value(s) applied	0.0156	Choice of data or Measurement methods and procedures	Calculation of baseline emissions.								
Data / Parameter	$NCV_{\text{biomass}}$																				
Data Unit	TJ/Tonne																				
Description	Net Calorific Value of the non-renewable woody biomass																				
Source of data	Methodology AMS I-E version 10.1, paragraph 23.																				
Value(s) applied	0.0156																				
Choice of data or Measurement methods and procedures	Calculation of baseline emissions.																				

	Purpose of data	Calculation of baseline emissions.
	Additional comment	Wood fuel will however not be used in project devices. The value of $NCV_{biomass}$ will only be used to estimate baseline emissions
	<b>ASSESSMENT OPINION</b>	
	The parameter is well stated as per the requirements of the applied methodology(ies) and considers the application of the default value as per the methodology for the calculation of baseline emissions.	
	This is found acceptable by the DOE.	
	Data / Parameter	$NCV_{Denatured\ alcohol}$
	Data Unit	$TJ / m^3$
	Description	Energy Content of denatured alcohol
	Source of data	2006 IPCC Guidelines for National Greenhouse Gas inventories combined with default density of ethanol.
Value(s) applied	$0.0213\ TJ / m^3$	
Choice of data or Measurement methods and procedures	<p>"Pure ethanol and alcoholic beverages are heavily taxed as a psychoactive drug, but ethanol has many uses that do not involve consumption by humans. To relieve the tax burden on these uses, most jurisdictions waive the tax when an agent has been added to the ethanol to render it unfit to drink. These include bittering agents such as denatonium benzoate and toxins such as methanol, naphtha, and pyridine. Products of this kind are called denatured alcohol".</p> <p><a href="http://en.wikipedia.org/wiki/Ethanol">http://en.wikipedia.org/wiki/Ethanol</a></p> <p>Denatured alcohol will consist mostly Ethanol. Net calorific value of ethanol is 27.0 TJ/Gg according to 2006 IPCC Guidelines for National Greenhouse Gas inventories. Volume 2 – Energy, Chapter 1 – Introduction, Table 1.2 "Default Net Calorific Values (NCVs)".</p> <p>Density of ethanol is 0.789 g/cm<sup>3</sup>  <a href="http://en.wikipedia.org/wiki/Ethanol">http://en.wikipedia.org/wiki/Ethanol</a></p> <p>NCV for ethanol is hence calculated as  <math>(27.0 * 0.789 / 1000) = 0.0213\ TJ / m^3</math></p> <p>Denatured alcohol will consist of a mix of ethanol and other types of alcohol or toxins or bittering agents. Ethanol or methanol shall always be the predominant type of fuel in the denatured alcohol mix that will be used by the project.</p>	
Purpose of data	Calculation of baseline emissions.	
Additional comment	Ethanol is the same as bio gasoline. See 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Chapter 1 Introduction, Table 1.1 – Definitions of fuel types used in the 2006 IPCC guidelines. The terms ethanol, alcohol, denatured ethanol and denatured alcohol might be used with the same meaning both in the text and in the formulas of this PoA DD.	
<b>ASSESSMENT OPINION</b>		

The parameter is well stated as per the requirements of the applied methodology(ies) and considers a default value for the Denatured Alcohol (i.e. bio-ethanol for the ethanol cookstoves) that is supported by literature and official data of "2006 IPCC Guidelines for National Greenhouse Gas inventories", combined with default density of ethanol extracted for the web.

The DOE has cross-checked that the latest updates of the "2006 IPCC Guidelines for National Greenhouse Gas inventories" do not consider any variation in this default value and hence the selected one is found to be correct and applicable at the time of requesting PoA Period Renewal.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	NCV <sub>Charcoal</sub>
<b>Data Unit</b>	TJ/Tonne
<b>Description</b>	Net Calorific Value of charcoal
<b>Source of data</b>	To be determined in CPA
<b>Value(s) applied</b>	To be determined in CPA
<b>Choice of data or Measurement methods and procedures</b>	<p>NCV<sub>charcoal</sub> will be determined from;</p> <ul style="list-style-type: none"> <li>a) Literature when this is available for the area included in the CPA.</li> <li>b) From studies and calculations from a lab analysis based on local baseline conditions if the value cannot be found in available literature.</li> </ul> <p>From generic values approved by the CDM EB, if point a) or b) is not possible to obtain in a verifiable way.</p>
<b>Purpose of data</b>	Calculation of baseline emissions.
<b>Additional comment</b>	Charcoal will however not be used in project devices. The value of NCV <sub>charcoal</sub> will only be used to estimate baseline emissions

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation for each CPA for the used charcoal considered in the calculations and its Net Calorific Value as per the available literature or from studies and calculations from a laboratory analysis based on local conditions. In cases where there is not any of such possibilities, default values approved by CDM EB may be used for the calculation of baseline emissions.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	$\eta_{old,i}$
<b>Data Unit</b>	Fraction
<b>Description</b>	Efficiency of pre-project device
<b>Source of data</b>	Baseline survey.
<b>Value(s) applied</b>	To be determined by SSC-CPA.
<b>Choice of data or Measurement methods and procedures</b>	<p>Efficiency of pre-project device, which is a three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney; for other types of devices, a default value of 0.2 may be optionally used. Use weighted average values (taking the amount of woody biomass consumed by each device as the weighting factor) if more than one type of device is being replaced</p> <p>Will use the weighted average of the default values of 0.1 and 0.2 according to the definition in the methodology</p>
<b>Purpose of data</b>	Calculation of baseline emissions.

	Additional comment	Not applicable.
	<b>ASSESSMENT OPINION</b>	
	The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation based on survey efforts for each CPA for the determination of the efficiency of the baseline devices.	
	This is found acceptable by the DOE.	
	<b>Data / Parameter</b>	C <sub>CF</sub>
	Data Unit	Number
	Description	Charcoal conversion factor.
	Source of data	To be determined by CPA
	Value(s) applied	To be determined by CPA.
Choice of data or Measurement methods and procedures	<p>Credible local conversion factors shall be used if available. If this is not available, then a study might be carried out to determine the wood to Charcoal conversion factor. Such study may then be carried out by independent 3<sup>rd</sup> party which might be carried out by, in cooperation with, the United Nations or the host country government or DNA. Such studies might be carried out in accordance with guidelines from <a href="https://www.grida.no/">https://www.grida.no/</a>.</p> <p>If such a study is perceived as too risky to carry out, then the default value of 6 kg of firewood (wet basis) per kg of charcoal (dry basis). may be used. It should be noted that Charcoal production and distribution is a criminal undertaking and such activities is the main source of financing of terrorist activities in Africa. It might hence be of great danger to engage in studies on how such production is carried out. If such studies can be carried out, then such studies will be carried out if there is no credible local conversion to be found in literature.</p>	
Purpose of data	Calculation of baseline emissions.	
Additional comment	GRIDA has quantified the impact on terrorist financing from charcoal production and sales in east Africa on behalf of UNEP and INTERPOL. GRIDA or other UN organizations might in the future engage in process to determine CCF values so as to provide even better quantification of the development value of reducing charcoal usage.	
<b>ASSESSMENT OPINION</b>		

The Value of  $C_{CF}$ , is used in the formula for calculation of ER in the PoA. CME has to make adjustments to the calculations of ERs relative to what is described in the methodologies due to the consideration of potential various type of baseline fuels, for the determination of the parameter  $BE_y$  using the proposed equation as follows:

$$BE_y = BE_{y, \text{Denatured alcohol}} + BE_{y, \text{Biogas}} + BE_{y, \text{Water}}$$

This formula is used, even if not explicitly referred to in the methodology, to account for the ERs for all the 3 solutions in which ERs might be achieved.

$$B_{y, \text{Denatured alcohol}} = (((HG_{p,y, \text{Denatured alcohol}} / (NCV_{\text{Biomass}} * \eta_{\text{old}})) * (1 - C_P)) + ((HG_{p,y, \text{Denatured alcohol}} / (NCV_{\text{Charcoal}} * \eta_{\text{old}})) * (C_P * C_{CF}))) * LF$$

The formula is in line with the applied version of the methodology but adapted for the determination of the portion of type of fuels considered for the determination of  $B_y$ .

The formula also is adapted to consider the LF (Leakage) as part of the determination of  $B_y$  and to account for the different emissions from wood and charcoal. In order to account for the different emission from wood and charcoal, the formula has to account for the portion of fuel replaced that was used as wood and how much of the fuel replaced was used as charcoal.

Furthermore, the formula accounts for the portion of wood needed to produce one unit of charcoal ( $C_{CF}$ ).

The approach for adaptation of the formula is found acceptable by the DOE.

Moreover, the choice of the data for measurement is considered acceptable (use of credible local conversion factors; performance of particular local studies; use of the default value of 6 kg of firewood (wet basis) per kg of charcoal (dry basis)).

Data / Parameter	$C_P$
Data Unit	Fraction.
Description	Portion of woody biomass that is used in the form of Charcoal in the project area.
Source of data	Baseline survey.
Value(s) applied	To be determined by CPA.
Choice of data or Measurement methods and procedures	Not applicable.
Purpose of data	Calculation of baseline emissions.
Additional comment	Not applicable.
ASSESSMENT OPINION	
Found acceptable by the DOE based on the assessment done above for the parameter $C_{CF}$ .	

Data / Parameter	LF
Data Unit	Fraction.
Description	Net to gross adjustment factor of 0.95 to account for leakage.
Source of data	Default value in methodology.
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	Not applicable.
Purpose of data	Calculation of leakage.
Additional comment	Not applicable.
ASSESSMENT OPINION	

The parameter is well stated as per the requirements of the applied methodology(ies) and considers the default gross to net adjustment factor for the determination of Leakage as per the prescriptions of the methodology, hence in compliance with the AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 10.1<sup>/05/</sup> Paragraph 41 (c) and with the AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” version 08.0<sup>/06/</sup> Paragraph 26.

The CME applies this factor for both calculations based on both applied methodologies (to be noted that the AMS-III.AV version 08.0<sup>/06/</sup> states that the Leakage consideration shall be as per the indications in the AMS I.E version 10.1<sup>/05/</sup>, as per its Paragraph 26.

This is found acceptable by the DOE.

#### For AMS-III.AV\_v8.0

<b>Data / Parameter</b>	QPW <sub>pp</sub>
Data unit	Litres
Description	Average volume of drinking water per person per day
Source of data	Estimated through ex ante survey or official data, or peer reviewed literature or local expert opinion.  Alternatively, a default value of 3 litres per person per day can be used.  The maximum value of 5.5 litres per person per day shall not be exceeded
Value(s) applied	3
Choice of data or Measurement methods and procedures	-
Purpose of data	Calculation of baseline emissions.
Additional comment	Not applicable.
<b>ASSESSMENT OPINION</b>	
The parameter is well stated as per the requirements of the applied methodology(ies) and considers a default value of 3 Litres per person per day.	
This is found acceptable by the DOE.	

<b>Data / Parameter</b>	LS
Data unit	Years
Description	Life span of water treatment technologies
Source of data	Manufacturer's specifications
Value(s) applied	-
Choice of data or Measurement methods and procedures	-
Purpose of data	-
Additional comment	In cases where the life span of the water treatment technologies is shorter than the crediting period of the project activity, the project proponent shall ensure that the units are replaced in order to continue claiming emission reductions. There shall be measures in place to ensure that end users have access to replacement purification systems of comparable quality. These measures shall be documented in the CPA-DD
<b>ASSESSMENT OPINION</b>	

The parameter is well stated as per the requirements of the applied methodology(ies) and shall be considered at CPA/deployed device level because of the potential different types and solutions that can be deployed under the PoA.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	$\eta_{wb}$
<b>Data Unit</b>	%
<b>Description</b>	Efficiency of the water boiling systems being replaced.
<b>Source of data</b>	Project activity site
<b>Value(s) applied</b>	Use one of the options below: (a) The efficiency of the water boiling system shall be established using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of systems are encountered; (b) 0.10 default value may be optionally used if the replaced system or the system that would have been used is a three-stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system that is without a grate as well as a chimney; for the rest of the systems using woody biomass 0.2 default value may be optionally used; (c) 0.5 default value may be used if the replaced system or the system that would have been used is a fossil fuel combusting system
<b>Choice of data or Measurement methods and procedures</b>	Not applicable.
<b>Purpose of data</b>	Calculation of baseline emissions.
<b>Additional comment</b>	

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and shall be considered at CPA/baseline device level because of the potential different baseline water boiling systems in the implementation areas of the CPAs

The CME provides the three options as stated in the methodology for the purpose of determination of the Efficiency of the water boiling systems being replaced for each CPA.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	$BL_{fuel, i}$
<b>Data Unit</b>	Fraction.
<b>Description</b>	Proportions of baseline fuel type i (NRB and fossil fuel).
<b>Source of data</b>	Estimated ex ante through a survey or official data or peer reviewed literature or local expert opinion.
<b>Value(s) applied</b>	To be determined in SSC- CPA.
<b>Choice of data or Measurement methods and procedures</b>	Estimated ex ante through a survey or official data or peer reviewed literature or local expert opinion
<b>Purpose of data</b>	Calculation of baseline emissions.
<b>Additional comment</b>	Not applicable.

#### ASSESSMENT OPINION

	<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation for each CPA based on the different options that the methodology provides (i.e. through a survey or official data or peer reviewed literature or local expert opinion).</p> <p>This is found acceptable by the DOE.</p> <table border="1" data-bbox="475 385 1417 891"> <tr> <td><b>Data / Parameter</b></td> <td>X<sub>boil</sub></td> </tr> <tr> <td><b>Data Unit</b></td> <td>%</td> </tr> <tr> <td><b>Description</b></td> <td>Fraction of the population serviced by the project activity for which the common practice of purification is or would have been water boiling.</td> </tr> <tr> <td><b>Source of data</b></td> <td>Established ex ante through survey</td> </tr> <tr> <td><b>Value(s) applied</b></td> <td>To be determined in SSC-CPA</td> </tr> <tr> <td><b>Choice of data or Measurement methods and procedures</b></td> <td>To be determined in SSC-CPA</td> </tr> <tr> <td><b>Purpose of data</b></td> <td>Calculation of baseline emissions.</td> </tr> <tr> <td><b>Additional comment</b></td> <td>Not applicable.</td> </tr> </table> <p><b>ASSESSMENT OPINION</b></p> <p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers the calculation based on survey efforts for each CPA for the determination of the Fraction of the population serviced by the project activity for which the common practice of purification is or would have been water boiling.</p> <p>This is found acceptable by the DOE.</p> <p>It is the opinion of the validation team that the ex-ante parameters for the two applied methodologies are deemed reasonable and correct, in line with the applicable methodologies<sup>/05//06/</sup>, the VVS for PoAs<sup>/01/</sup> version 02.0 and the PS for PoAs<sup>/02/</sup> version 02.0.</p> <p>The validation team has checked that the procedure contained in the applied methodologies<sup>/05//06/</sup> to identify the most reasonable baseline scenario and the update of the necessary ex-ante fixed parameters for the 2<sup>nd</sup> PoA period were correctly applied in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021.</p> <p>Hence, this has been accepted by the DOE</p>	<b>Data / Parameter</b>	X <sub>boil</sub>	<b>Data Unit</b>	%	<b>Description</b>	Fraction of the population serviced by the project activity for which the common practice of purification is or would have been water boiling.	<b>Source of data</b>	Established ex ante through survey	<b>Value(s) applied</b>	To be determined in SSC-CPA	<b>Choice of data or Measurement methods and procedures</b>	To be determined in SSC-CPA	<b>Purpose of data</b>	Calculation of baseline emissions.	<b>Additional comment</b>	Not applicable.
<b>Data / Parameter</b>	X <sub>boil</sub>																
<b>Data Unit</b>	%																
<b>Description</b>	Fraction of the population serviced by the project activity for which the common practice of purification is or would have been water boiling.																
<b>Source of data</b>	Established ex ante through survey																
<b>Value(s) applied</b>	To be determined in SSC-CPA																
<b>Choice of data or Measurement methods and procedures</b>	To be determined in SSC-CPA																
<b>Purpose of data</b>	Calculation of baseline emissions.																
<b>Additional comment</b>	Not applicable.																
<b>Findings</b>	<p>CL#2; CAR#1 were raised and closed accordingly.</p> <p>Please refer to Appendix 4 for the detailed description and closure of the findings.</p>																
<b>Conclusion</b>	<p>After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraph 382.</p>																

### D.2.3. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	<p>In accordance with the Paragraph 390 (a) (iv) of the VVS for PoAs<sup>/01/</sup> version 02.0, the validation team appointed by Applus+ Certification reviewed whether the estimation of emission reductions is correct against the requirements of the applied methodology(ies).</p> <p>As outlined in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, calculations of GHG emissions reductions to be achieved by the CPAs of the PoA during the 2<sup>nd</sup> 7-year PoA period are based on the application of the following methodologies:</p>
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- AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 10.1<sup>/05/</sup>.
- AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” version 08.0<sup>/06/</sup>.

GHG emissions reductions ( $ER_y$ ) to be achieved by the CPAs of the PoA during the 2<sup>nd</sup> 7-year PoA period are defined as the difference between baseline emissions ( $BE_y$ ), project emissions ( $PE_y$ ) and Leakage Emissions ( $LE_y$ ).

Emission reductions would be then calculated as:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

$ER_y$  = Emission reductions in year y (t CO<sub>2</sub>e/yr)

$BE_y$  = Baseline emissions in year y (t CO<sub>2</sub>/yr)

$PE_y$  = Project emissions in year y (t CO<sub>2</sub>e/yr)

$LE_y$  = Leakage emissions in year y (t CO<sub>2</sub>e/yr)

$LE_y$  is calculated based on the application of a gross to net adjustment factor of 5%. Hence leakages are not calculated as a separate value.

This in accordance with Paragraph 41 (c) of AMS-I.E version 10.1<sup>/05/</sup> and Paragraph 26 of AMS-III.AV version 08.0<sup>/06/</sup>, hence found acceptable by the DOE.

Assessment of the determination of baseline emissions:

As established by selected methodologies and applicable methodological tools and correctly outlined in Sections I.6.3 of the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, are directly and correctly determined as follows:

**Baseline emissions:**

Baseline emissions are calculated as follows:

$$BE_y = BE_{y, \text{Denatured alcohol}} + BE_{y, \text{Water}}$$

Where:

$$BE_{y, \text{Denatured alcohol}} = B_{y, \text{Denatured alcohol}} * f_{NRB, y} * NCV_{\text{biomass}}$$

$$BE_{y, \text{Water}} = (((QPW_y * m * X_{\text{boil}} * SEC * \sum (BL_{\text{fuel}, i} * f_i * EF_{\text{projected\_fossil fuel}, i} * 10^{-9}) * (1 - C_P)) + ((QPW_y * m * X_{\text{boil}} * SEC * \sum (BL_{\text{fuel}, i} * f_i * EF_{\text{projected\_fossil fuel}, i} * 10^{-9}) * (C_P * C_{CF}))) * LF$$

Where:

$BE_y$  = Baseline Emissions during the year y, in tCO<sub>2</sub>e

$B_y$  = Quantity of biomass that is substituted or displaced in tonnes

$f_{NRB, y}$  = Fraction of biomass used in the absence of the project activity in year y, that can be established as non-renewable biomass.

$NCV_{\text{biomass}}$  = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonnes)

$EF_{\text{projected\_fossil fuel}, i}$  = Emission factor of the fuel type i substituted (t CO<sub>2</sub>/TJ)

$QPW_y$  = Total quantity of water purified by the project in year y (L)

m	=	Fraction of functional appliances that are providing the SDW (%). Only project appliances that (i) use technologies that meet the technology standards as per paragraph 4(b) and (ii) are operating or replaced by an equivalent in service appliance and (iii) deliver microbiologically safe drinking water, are counted for emission reductions.
$X_{\text{boil}}$	=	Fraction of the population served by the project activity for which the common practice of water treatment is or would have been water boiling. It is determined ex ante through surveys.
SEC	=	Specific energy consumption required to boil one litre of water (kJ/L), to be calculated according to paragraphs below. The value equals $357.48 \text{ kJ/L} / n_{\text{wb}}$ .
$BL_{\text{fuel},i}$	=	Proportions of baseline fuel type i (NRB and/or fossil fuels) used in the absence of the project activity (fraction). If the baseline fuel is only non-renewable biomass then the value to be applied might be 1.
$f_i^4$	=	Fraction of non-renewable fuel type i used in the absence of the project activity in year y. If the baseline fuel is only non-renewable woody biomass or fossil fuel, the value to be applied might be 1
LF		Net to gross adjustment factor of 0.95 to account for leakage
<b><math>B_{y,\text{Denatured alcohol}}</math> is determined:</b>		
$B_{y,\text{Denatured alcohol}}$	=	$\left( \left( \frac{HG_{p,y,\text{Denatured alcohol}}}{(NCV_{\text{Biomass}} * \eta_{\text{old}})} \right) * (1 - C_P) \right) + \left( \frac{HG_{p,y,\text{Denatured alcohol}}}{(NCV_{\text{Charcoal}} * \eta_{\text{old}})} \right) * (C_P * C_{CF}) \right) * LF$
Where		
$NCV_{\text{Biomass}}$	=	Net Calorific Value of the non-renewable woody biomass that is substituted.
$NCV_{\text{Charcoal}}$	=	Net Calorific Value of the non-renewable woody biomass that is used in the form of charcoal and which is substituted.
$\eta_{\text{old},i}$	=	Efficiency of the old stoves that has been replaced by the project.
$B_{y,\text{Denatured alcohol}}$	=	Quantity of woody biomass that is substituted or displaced in ton as a result of the denatured alcohol used by the project in year y.
$HG_{p,y,\text{Denatured alcohol}}$	=	Quantity of thermal energy generated by the denatured alcohol used by the project participating households in year y, measured in TJ.
$C_{CF}$	=	Charcoal Conversion Factor
$C_P$	=	Portion of woody biomass that is used in the form of charcoal in the project area.
LF	=	Net to gross adjustment factor of 0.95 to account for leakage.

<sup>4</sup> fi = fNRB

**P<sub>y</sub> is determined.**

P<sub>y</sub> is the population who consumes the purified water serviced by the project activity in period y.

P<sub>y</sub> is determined by multiplying the average number of people in households provided with drinking water as registered as part of monitoring survey, multiplied with the number of households registered as provided with drinking water solutions<sup>5</sup>.

**QPW<sub>y</sub> is determined**

The quantity of purified water shall be monitored and calculated based on option 2.2 (equation 3) of paragraph 17 b) of the applied methodology, as follows:

$$QPW_y = P_y \times \min(QPW_{pp}; 3)^6 \times 365$$

Where:

P<sub>y</sub> = Population who consumes the purified water serviced by the project activity in year y.

QPW<sub>pp</sub> = Average volume of drinking water per person per day (L/person/day).

**HG<sub>p,y</sub> is determined****HG<sub>py</sub> calculations;**

$$HG_{p,y,Denatured\ alcohol} = NCV_{Denatured\ alcohol} * ET_{Usage,y} / 1000 * ET_{Stoves,Units,y} * (ET_{stove, efficiency} / 100) * 365$$

Where

HG<sub>p,y,Denatured alcohol</sub> = Quantity of thermal energy generated by the new renewable energy technology in the project area in year y (TJ).

NCV<sub>Denatured alcohol</sub> = Net Calorific Value of denatured alcohol. Based on default value.

ET<sub>Usage,y</sub> = Average denatured alcohol usage per litre per household in year y. Divided by 1000 to get value in m<sup>3</sup>.

ET<sub>Stoves,Units,y</sub> = Ethanol stoves in use in the project area in year y.

ET<sub>stove, efficiency,y</sub> = Average thermal efficiency of ethanol stove used by the project households.

**η<sub>old,i</sub> is determined by:**

η<sub>old,i</sub> = Efficiency of pre-project device.

Will be determined using options and values provided by the SSC methodology AMS-I.E version 10.1.

**f<sub>NRB,y</sub> is determined by:**

<sup>5</sup> The value P<sub>y</sub> is the total number of people provided with drinking water, and is not used in the calculation of ER. Rather the value of P<sub>y</sub> for each household is used for calculating ER from each of the households monitored as part of monitoring survey. It is the average ER from the household selected for monitoring that is used to calculate total ER from a CPA or a batch of CPAs, not the average of the monitored values. The same principle applies for all the parameters used for calculation of emission reductions.

<sup>6</sup> Cap of 5.5 has been proposed by §18 of the methodology based on the population (P) serviced by the project activity and the maximum quantity of drinking water per person per day (L/person/day), as recommended by WHO. Therefore, this is conservative. A default value of 3 can also be used in accordance with the methodology.

fNRB may be determined by a third party according to nationally approved methods or based on default values.

fNRB may also be determined by "TOOL30: Calculation of the fraction of non-renewable biomass".

### **Project emissions**

Project emissions are calculated as follows:

Bioethanol is a renewable fuel and the CPAs under this PoA will take advantage of their availability in the project regions.

Therefore,

$$PE_y = 0$$

### **Leakage Emissions**

LE<sub>y</sub> is calculated based on the application of a gross to net adjustment factor of 5%. Hence leakages are not calculated as a separate value.

This in accordance with Paragraph 41 (c) of AMS-I.E version 10.1<sup>/05/</sup> and Paragraph 26 of AMS-III.AV version 08.0<sup>/06/</sup>, hence found acceptable by the DOE.

### **Determine the average emission reduction from project participating households.**

Emission reduction will be calculated based on the project participating households selected for monitoring survey. When biennial inspection is chosen a 95 per cent confidence interval and a 10 per cent margin of error requirements shall be achieved for the sampling parameters. On the other hand, when the project proponents choose to inspect annually, a 90 per cent confidence interval and a 10 per cent margin of error requirement shall be achieved for the sampled parameters. In case were survey result indicate that 90/10 percent or 95/10 precision is not achieved, the lower bound of a 90 per cent or a 95 per cent confidence interval of the parameter value may be chosen as an alternative to repeating the survey effort to achieve the 90/10 Or 95/10 precision.

The total emission reductions from these households will then be divided by the number of households that has been subject to monitoring in order to determine the average emission reduction per project participating household.

### **Determine total CPA emission reduction.**

Total emission reduction from the CPA is determined by multiplying the average emission reduction per project participating households with the total number of project participating households at the time of the monitoring.

Given the above, Applus+ Certification is able to confirm the following:

- All assumptions and data used by the Coordinating/managing entity are listed in the PoA-DD and/or supporting documents, including their references and sources;
- All documentation used by the Coordinating/managing entity as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD;
- All values used in the PoA-DD are considered reasonable in the context of the proposed CDM programme of activities;
- The baseline methodology(ies) have been applied correctly to calculate project emissions, baseline emissions, and leakage emissions;
- All estimates of the baseline, project and leakage emissions can be replicated using the data and parameter values provided in the PoA-DD for

	<p>the estimation of the emission reductions at CPA level.</p> <p>The validation team confirms that the approach for application of formulae for the determination of emission reductions achieved during the 2<sup>nd</sup> 7-year PoA period is correct and deemed reasonable, hence accepted by the DOE.</p>
<b>Findings</b>	<p>CL#7; CL#8 were raised and closed accordingly.</p> <p>Please refer to Appendix 4 for the detailed description and closure of the findings.</p>
<b>Conclusion</b>	<p>After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraph 390 a) (iv).</p>

#### D.2.4. Validity of monitoring plan

<b>Means of validation</b>	<p>In accordance with Paragraph 378 and Paragraph 390 (a) (iv) of the VVS for PoAs<sup>/01/</sup> version 02.0, the validation team appointed by Applus+ Certification reviewed whether monitoring plan mentioned in the re revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 is valid and correct.</p> <p>Assessment team has reviewed applicable monitoring plan in the proposed generic CPA-DD.</p> <p>The CME has adopted the following monitoring parameters in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 as per the applied methodologies<sup>/05/06/</sup>.</p> <p><b>For AMS-I.E.:</b></p> <table border="1"> <tr> <td><b>Data / Parameter</b></td><td>Date of commissioning of project device type i</td></tr> <tr> <td>Data unit</td><td>Date</td></tr> <tr> <td>Description</td><td>Actual date of commissioning of the project device.</td></tr> <tr> <td>Source of data</td><td>Internal records</td></tr> <tr> <td>Value(s) applied</td><td>To be determined by SSC-CPA.</td></tr> <tr> <td>Measurement methods and procedures</td><td>Not applicable.</td></tr> <tr> <td>Monitoring frequency</td><td>Fixed and recorded at the time of commissioning/distribution</td></tr> <tr> <td>QA/QC procedures</td><td>Not applicable</td></tr> <tr> <td>Purpose of data</td><td>Calculations of baseline emissions.</td></tr> <tr> <td>Additional comments</td><td>Not applicable</td></tr> <tr> <td colspan="2"><b>ASSESSMENT OPINION</b></td></tr> <tr> <td colspan="2"> <p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination by each CPA-DD to be fixed and recorded at the time of commissioning/distribution.</p> <p>This is found acceptable by the DOE.</p> </td></tr> </table> <table border="1"> <tr> <td><b>Data / Parameter</b></td><td>Date of commissioning of batch j</td></tr> <tr> <td>Data unit</td><td>Date</td></tr> <tr> <td>Description</td><td>To establish the date of commissioning, the Project Participant may opt to group the devices in "batches" and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch</td></tr> <tr> <td>Source of data</td><td>Internal records</td></tr> <tr> <td>Value(s) applied</td><td>To be determined by SSC-CPA</td></tr> </table>	<b>Data / Parameter</b>	Date of commissioning of project device type i	Data unit	Date	Description	Actual date of commissioning of the project device.	Source of data	Internal records	Value(s) applied	To be determined by SSC-CPA.	Measurement methods and procedures	Not applicable.	Monitoring frequency	Fixed and recorded at the time of commissioning/distribution	QA/QC procedures	Not applicable	Purpose of data	Calculations of baseline emissions.	Additional comments	Not applicable	<b>ASSESSMENT OPINION</b>		<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination by each CPA-DD to be fixed and recorded at the time of commissioning/distribution.</p> <p>This is found acceptable by the DOE.</p>		<b>Data / Parameter</b>	Date of commissioning of batch j	Data unit	Date	Description	To establish the date of commissioning, the Project Participant may opt to group the devices in "batches" and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch	Source of data	Internal records	Value(s) applied	To be determined by SSC-CPA
<b>Data / Parameter</b>	Date of commissioning of project device type i																																		
Data unit	Date																																		
Description	Actual date of commissioning of the project device.																																		
Source of data	Internal records																																		
Value(s) applied	To be determined by SSC-CPA.																																		
Measurement methods and procedures	Not applicable.																																		
Monitoring frequency	Fixed and recorded at the time of commissioning/distribution																																		
QA/QC procedures	Not applicable																																		
Purpose of data	Calculations of baseline emissions.																																		
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Source of data	Internal records																																		
Value(s) applied	To be determined by SSC-CPA																																		

Measurement methods and procedures	Not applicable.
Monitoring frequency	Fixed and recorded at the time of commissioning/distribution of the last project device in the batch
QA/QC procedures	Not applicable
Purpose of data	Calculation of baseline emissions.
Additional comments	To be reported in the monitoring report.
<b>ASSESSMENT OPINION</b>	
<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination by each CPA-DD to be fixed and recorded at the time of commissioning/distribution of the last project device in the batch in case the CME opts to group the devices in "batches".</p> <p>This is found acceptable by the DOE.</p>	

<b>Data / Parameter</b>	$ET_{\text{stoves, units, y}}$
Data unit	Number
Description	Average number of ethanol stoves used by project participating households in year y.
Source of data	Monitoring of random sample of project participating households.
Value(s) applied	To be determined by SSC-CPA.
Measurement methods and procedures	Monitoring of randomly selected project participating household. The sample size shall be sufficient to obtain the required 90/10 confidence level for annual monitoring or 95/10 confidence level if monitoring is done biennially.
Monitoring frequency	At least every two years.
QA/QC procedures	The number of households that use ethanol stoves in the project area will be cross-checked with the sales records from the ethanol stove suppliers.
Purpose of data	Calculations of baseline emissions.
Additional comments	A project participating household will normally have no ethanol stove or they will have 1 ethanol stove. The average will hence be a value between 0 and 1 ethanol stove per household.
<b>ASSESSMENT OPINION</b>	
<p>The parameter is well stated as per the requirements of the applied methodology(ies) and the formula proposed for the calculation of the baseline emissions (particularly the parameter <math>HG_{py}</math>) adapted as described above in Section D.2.3. of this Validation Report.</p> <p>The parameter considers, per each CPA, the conduction of a random sampling survey among the participating households, that is proposed in line with the monitoring requirements of the applied methodology in terms of the confidence/precision levels to be considered and also establishes adequate QA/QC procedures.</p> <p>This is found acceptable by the DOE.</p>	

<b>Data / Parameter</b>	$ET_{\text{Usage, y}}$
Data unit	Litres.
Description	Average daily denatured alcohol usage by project participating households in year y.
Source of data	Monitoring of a random sample of project participating households.
Value(s) applied	To be determined by SSC-CPA.

	Measurement methods and procedures	The usage of denatured alcohol will be physically recorded in a representative number of households over a period of 7 days. This will be used to calculate the average daily denatured alcohol consumption per household that use ethanol stoves. The sample size shall be sufficient to obtain the required 90/10 confidence level for annual monitoring.										
	Monitoring frequency	Annually.										
	QA/QC procedures	<p>The denatured alcohol consumption will be based on pure denatured alcohol. Hence the denatured alcohol used by the household will be measured to determine its purity. If the NCV of the denatured alcohol is below that of the default NCV<sub>denatured alcohol</sub> 0.0213 TJ/m<sup>3</sup> then the ET usage shall be adjusted for the lower NCV of the denatured alcohol used.</p> <p>If the NCV of the denatured alcohol used is 10% lower than the default value for NCV<sub>denatured alcohol</sub> then the ET<sub>usage,y</sub> shall be reduced by 10% relative to the measured volume of denatured alcohol used.</p> <p>The purity of the denatured alcohol will be measured and registered by the representative sample of households monitored for ET<sub>usage,y</sub>.</p>										
	Purpose of data	Calculations of baseline emissions.										
	Additional comments	<p>The purity or strength of the denatured alcohol will be measured at every household which are monitored for ET<sub>usage,y</sub>. This value will then be multiplied with the volume of denatured alcohol used in order to determine the equivalent of denatured alcohol with 100% purity.</p> <p>Example. A household use 5 litre of denatured alcohol with 90% purity, then the calculation will be <math>5 * 90\% = 4.5</math> liter of denatured alcohol with 100% purity.</p>										
	<b>ASSESSMENT OPINION</b>		<p>The parameter is well stated as per the requirements of the applied methodology(ies) and the formula proposed for the calculation of the baseline emissions (particularly the parameter HG<sub>py</sub>) adapted as described above in Section D.2.3. of this Validation Report.</p> <p>The parameter considers, per each CPA, the conduction of a random sampling survey among the participating households, that is proposed in line with the monitoring requirements of the applied methodology in terms of the confidence/precision levels to be considered and also establishes adequate QA/QC procedures.</p> <p>This is found acceptable by the DOE.</p>									
<table border="1"> <tr> <td><b>Data / Parameter</b></td><td>ET<sub>stove,Efficiency,y</sub></td></tr> <tr> <td><b>Data unit</b></td><td>%</td></tr> <tr> <td><b>Description</b></td><td>Average thermal efficiency of ethanol stove used by the project participating households.</td></tr> <tr> <td><b>Source of data</b></td><td>Monitoring of random sample of project participating households.</td></tr> <tr> <td><b>Value(s) applied</b></td><td>-</td></tr> </table>			<b>Data / Parameter</b>	ET <sub>stove,Efficiency,y</sub>	<b>Data unit</b>	%	<b>Description</b>	Average thermal efficiency of ethanol stove used by the project participating households.	<b>Source of data</b>	Monitoring of random sample of project participating households.	<b>Value(s) applied</b>	-
<b>Data / Parameter</b>	ET <sub>stove,Efficiency,y</sub>											
<b>Data unit</b>	%											
<b>Description</b>	Average thermal efficiency of ethanol stove used by the project participating households.											
<b>Source of data</b>	Monitoring of random sample of project participating households.											
<b>Value(s) applied</b>	-											

	Measurement methods and procedures	<p>1. The efficiency of the project devices shall be based on certification by a national standards body or an appropriate certifying agent recognized by that body.</p> <p>2. Manufacturer specifications on efficiency based on water boiling test (WBT) may be used. The WBT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the WBT Protocol 17, 18 or ISO 19867-1 listed by Clean Cooking Alliance (See <a href="https://www.cleancookingalliance.org/technology-and-fuels/testing/protocols.html">https://www.cleancookingalliance.org/technology-and-fuels/testing/protocols.html</a>)).</p> <p>The sampling test of stoves by such certification bodies/agents or manufacturers shall be conducted following a 90/10 precision in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities".</p>
	Monitoring frequency	Annually.
	QA/QC procedures	Not applicable
	Purpose of data	Calculation of baseline emissions.
	Additional comments	<p>Manufacturer of project devices may confirm with technical justification based on certification by a national standards body or an appropriate certifying agent recognized by that body that no decrease in efficiency of project device is envisaged during the crediting period; or</p> <p>Alternatively, the rate of efficiency drop will be determined for a representative sample of the first batch of project devices <i>i</i> in year <i>y</i> and assumed that same rate of loss in efficiency applies to all other batches.</p> <p>In other words, it may be assumed that the degradation of efficiency measured in a representative sample of the first batch of project devices <i>i</i> apply to all subsequent batches. The efficiency of the project devices in the first batch has to be monitored annually through a representative sample and this rate of loss in efficiency may be applied correspondingly to all batches;</p> <p>The above in accordance with AMS II.G, version 11.1, paragraph 37 b and c.</p>
<b>ASSESSMENT OPINION</b>		



The parameter is well stated as per the requirements of the applied methodology(ies) and the formula proposed for the calculation of the baseline emissions (particularly the parameter  $HG_{p,y}$ ) adapted as described above in Section D.2.3. of this Validation Report.

The parameter considers, per each CPA, to use either the certification of the efficiency by a national standards body or an appropriate certifying agent recognized by that body or the manufacturer specifications based on water boiling test (WBT) carried out in accordance with national standards (if available) or international standards or guidelines.

The sampling test of stoves by such certification bodies/agents or manufacturers shall be conducted following a 90/10 precision in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities", which is found acceptable by the DOE.

This is in line with the monitoring requirements of the applied methodology in terms of the confidence/precision levels to be considered and also establishes adequate QA/QC procedures.

Regarding the decrease on efficiency with the use, the CME proposes that manufacturer of project devices may confirm with technical justification based on certification by a national standards body or an appropriate certifying agent recognized by that body that no decrease in efficiency of project device is envisaged during the crediting period; or

Alternatively, the rate of efficiency drop will be determined for a representative sample of the first batch of project devices  $i$  in year  $y$  and assumed that same rate of loss in efficiency applies to all other batches.

The above is in accordance with AMS II.G, version 11.1, paragraph 37 b and c.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	$HG_{p,y}$
Data unit	TJ
Description	Quantity of thermal energy generated by the new renewable energy technology in the project in year $y$
Source of data	Calculated in accordance with step 4 in section I.6.3
Value(s) applied	-
Measurement methods and procedures	
Monitoring frequency	Yearly
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions.
Additional comments	<p>The total value of <math>HG_{p,y}</math> is calculated from other monitored values and the number of households included in the project(s) at the time of calculation of the value <math>HG_{p,y}</math>.</p> <p>If Emission Reduction is claimed for a monitoring period that ends after the monitoring is done, then the number of households at the end of the monitoring period might be used for calculating the <math>HG_{p,y}</math> value for the whole CPA(s) for the period in which <math>HG_{p,y}</math> is calculated.</p>

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and considers the quantity of thermal energy generated by the new renewable energy technology calculated as per the equations and modalities in Section I.6.3. of the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and evaluated above in this Validation Report in Section D.2.3.

The CME has included the value of  $HG_{p,y}$  in line with the monitoring methodology to be monitored yearly, which is acceptable. However, has to be noted that the related parameters considered for the calculation of this one in line with the equations and modalities evaluated above in this Validation Report in Section D.2.3., have been established with a frequency of "at least every two years" in line with the registered monitoring plan of the PoA. Calculation of the parameter  $HG_{p,y}$  may not be done at the same time as the monitoring surveys to obtain the parameters referred.

$HG_{p,y}$  also has to consider the number of households included at the time of calculation of the value (end of monitoring period) while the other parameters do not have to be monitored at the end of the monitoring period. Monitoring of other parameters may be done at any time during the monitoring periods. The CME is capable to apply this approach while conducting the monitoring (calculation) of this parameter ( $HG_{p,y}$ ) in a yearly basis.

This is found acceptable by the DOE.

#### For AMS-III.AV

Data / Parameter	$P_y$
Data unit	Number.
Description	Population who consumes water provided by the project activity in year y
Source of data	Survey records
Value(s) applied	-
Measurement methods and procedures	The number of people in each household is determined from the households that is monitored as part of the monitoring surveys. This value is used to calculate the ER for the households that has been monitored.
Monitoring frequency	Annually
QA/QC procedures	Not applicable.
Purpose of data	Calculation of baseline emissions.
Additional comments	The value is used to calculate ER for each household monitored as part of the monitoring survey. The total value of $P_y$ , for the whole CPA or batch of CPAs monitored, is not used for calculation of ER.

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination of the parameter by each CPA-DD under a survey approach with a monitoring frequency in line with the prescriptions in the applied methodology.

This is found acceptable by the DOE.

Data / Parameter	$QPW_{y,y}$
Data unit	Liters
Description	Quantity of purified water in year y
Source of data	Calculated
Value(s) applied	-
Measurement methods and procedures	Default value in methodology.
Monitoring frequency	Annually

	QA/QC procedures	A default value of 3 litres per person per day may be used
	Purpose of data	Calculation of baseline emissions.
	Additional comments	Not applicable
	<b>ASSESSMENT OPINION</b>	
	<p>The parameter is well stated as per the requirements of the applied methodology(ies) and considers a default value of 3 Litres per person per day for the parameter as considered by the methodology with a monitoring frequency in line with the prescriptions in the latter.</p> <p>This is found acceptable by the DOE.</p>	
	<b>Data / Parameter</b>	m
	Data unit	Fraction
	Description	Fraction of functional appliances that are providing the SDW
	Source of data	Survey records
	Value(s) applied	To be determined by SSC-CPA.
	Measurement methods and procedures	Yes will be registered as 1 No will be registered as 0
	Monitoring frequency	Annually
	QA/QC procedures	<p>This parameter shall be determined through checking all appliances or a statistically representative sample of the appliances to ensure the following conditions that:</p> <ul style="list-style-type: none"> <li>a) They only use technologies that are meeting the SDW technology standards as per paragraph 4(b);</li> <li>b) They are still operating or are replaced by an equivalent in service appliance. The use of appliances shall be monitored through self-report measures (survey data from respondents) as well as physical signs that are observable (e.g. wetness of the unit, water in storage receptacle, functionality of parts) as per "Objective measures of functionality and use of project appliances" described in the Appendix.</li> <li>c) They are delivering microbiologically safe drinking water. Appliances shall deliver treated water verified to be &lt;1 cfu / 100 ml E. coli, using methods for measurement with a lower detection limit (LDL) of 1 cfu E. coli per 100 ml sample (See Box 3 below). Emission reductions cannot be claimed if over 10% of appliances in the project activity fail to meet the final water quality requirements mentioned above</li> </ul> <p>The sampling plan may also include provisions to collect information for records of replacement of appliances, filters and maintenance.</p>
	Purpose of data	Calculation of baseline emissions.
Additional comments	<p>A statistically valid sample of the appliances may be used to determine the parameter value, as per the relevant requirements for sampling in the "Standard for sampling and surveys for CDM project activities and programme of activities".</p> <p>Point c) above refers to the quality of the drinking water. This might be checked bi-annually in accordance with "parameter "Quality of safe drinking water" as specified in methodology AMS-III.AV version 08.0.</p> <p>90% confidence interval and a 10% margin of error requirement shall be achieved for the sampled parameters.</p>	
<b>ASSESSMENT OPINION</b>		

The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination of the parameter by each CPA-DD under a survey approach with a monitoring frequency and QA/QC procedures in line with the prescriptions in the applied methodology.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	Check for SDW public distribution network
Data unit	Yes or No
Description	Check if there is a public distribution network supplying SDW is installed
Source of data	Surveys (for example, this may be checked through a signed questionnaire/statement from relevant local authority/organizations based on laboratory testing or end-user surveys.)
Value(s) applied	-
Measurement methods and procedures	Monitoring if there is public distribution network supplying SDW available to the project participating household.
Monitoring frequency	Annually
QA/QC procedures	Not applicable.
Purpose of data	Calculation of baseline emissions.
Additional comments	If the value is 0, then the value in parameter "m" will be registered as 0. If so, no ER will be claimed from the households in which this parameter is 0, and hence reduce the average ER from the households monitored for ER.

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination of the parameter by each CPA-DD under a survey approach with a monitoring frequency in line with the prescriptions in the applied methodology.

This is found acceptable by the DOE.

<b>Data / Parameter</b>	Quality of safe drinking water
Data unit	-
Description	The quality of the safe drinking water
Source of data	Monitoring of random sample of project participating households.
Value(s) applied	To be determined by SSC-CPA.
Measurement methods and procedures	The safe drinking water quality is monitored on sample basis at least once every two years (biennial).
Monitoring frequency	At least once every two years.
QA/QC procedures	Not applicable
Purpose of data	Calculation of baseline emissions.
Additional comments	Emission reductions will not be claimed if project activities that fails to meet SDW standards

#### ASSESSMENT OPINION

The parameter is well stated as per the requirements of the applied methodology(ies) and considers a determination of the parameter by each CPA-DD under a survey approach with a monitoring frequency in line with the prescriptions in the applied methodology.

This is found acceptable by the DOE.

For those parameters that are to be monitored through surveys, the revised PoA-

	<p>DD<sup>/15/</sup> version 29 dated on 25/01/2021 in its Section I.7.2. (extended in Section I.7.3.) defines correctly the approach for the determination of the sampling exercise in line with the applied methodologies<sup>/05//06/</sup> and this has been found acceptable by the DOE.</p> <p>In this sense, the DOE would like to further confirm that the approach used for monitoring for avoiding systemic and non-systemic deviations due to the periods which the monitoring practices are being considered (i.e. along the different seasons) in order to be representative of the whole year conditions.</p> <p>The CME monitors households adhered to the programme and community water solutions in different months of the year, for each of the Crediting Period years, hence along an entire Crediting Period, due to the large number of instances that could be deployed under a CPA and different locations in the particular CPA, being a household not potentially monitored twice. By doing so, the CME avoids systemic deviations caused from seasonal circumstances (where this could be applicable) along a Crediting Period.</p> <p>By the other hand, the CME explains to the DOE that the barriers due to maintain monitoring staff along the entire year in each host country might affect the cost-effectiveness and further development of the programme. Hence, when talking about a practice that may vary along the time in the experience of the DOE assessing cookstove programmes (cooking, i.e. applicable for the ethanol cookstoves but not to the need of water as this is a need that develops constant along a year for normal drinking practices) instead of performing a monitoring of one single day to obtain data for the monitoring purposes in a most cost-effective manner, the CME proposes to extent that monitoring effort over a correlative 7-day period to reduce the potential occurrence of deviations and hence reduce non-systemic errors too along the Crediting Period.</p> <p>Along with the other measure explained above, it sounds reasonable to the DOE as it is applying conservative measures and mitigation of such risks even by affecting the cost-effectiveness of the programme implementation, without causing a harmful impact to the same, but avoiding as much as the programme is able to avoid, the potential deviations.</p> <p>Validation team can confirm that the parameters to be determined ex-post and the monitoring practices have been presented correctly and according to requirements of the applied methodologies<sup>/05//06/</sup> and other regulatory documents as well as that CME shall be able to monitor and report emission reductions ex-post for each included CPA.</p>
<b>Findings</b>	<p>CL#6; CL#9 were raised and closed accordingly.</p> <p>Please refer to Appendix 4 for the detailed description and closure of the findings.</p>
<b>Conclusion</b>	<p>After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraph 378 and Paragraph 390 (a) (iv).</p>

#### D.2.5. Eligibility criteria for inclusion of CPAs

<b>Means of validation</b>	<p>The DOE shall confirm whether that minimum eligibility criteria as required by PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124 have been described and that have been updated at the time of requesting renewal of PoA period.</p> <p>After the assessment (please refer to Appendix 6 in this Validation Report) the DOE can confirm that:</p> <ul style="list-style-type: none"> <li>- The Eligibility Criteria for inclusion or renewal of crediting period of corresponding CPAs in the registered PoA have been updated by the CME in accordance with the applicable validation requirements related to the</li> </ul>
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	<p>renewal of programme of activities period in the VVS for PoAs<sup>/01/</sup> version 02.0.</p> <ul style="list-style-type: none"> <li>- CME has outlined clear and unambiguous Eligibility Criteria for the inclusion or renewal of crediting period of a CPA under this PoA. The Eligibility Criteria, listed in applicable section (Generic CPA-DD of PoA-DD) have been validated by the validation team with regards to the applicability of the applied methodologies<sup>/05//06/</sup> and any other regulatory document and found them in compliance.</li> <li>- The Eligibility Criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion or renewal of crediting period of CPAs in the PoA. Furthermore validation team confirms that Eligibility Criteria for the inclusion of CPA have covered the minimum requirements as required by PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124.</li> </ul>
<b>Findings</b>	<p>CL#3; CAR#8 were raised and closed accordingly. Please refer to Appendix 4 for the detailed description and closure of the findings.</p>
<b>Conclusion</b>	<p>After assessment team check process and closure of related findings, the DOE can confirm that the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 complies with the requirements set out in VVS for PoAs<sup>/01/</sup> version 02.0 Paragraph 378.</p>

**SECTION E. Internal quality control**

&gt;&gt;

As a final step for the process of Renewal of PoA Period, the final documentation, including the Validation Report, have to undergo an internal quality control by the Technical Reviewer to be approved.

Details of the Technical Reviewer are provided within the Validation Report in Section B.2. and Appendix 2 for further references of knowledge and capability to conduct the quality checking.

After the Technical Review process, the final documentation has to undergo a final quality checking process called Administrative Review, done by the Applus+ Certification's Project Manager and/or Technical Support.

For final approval, the final set of documents are prepared by the DOE's Technical Manager or its deputy and signed by the authorized signatory of the DOE.

In case any of the persons performing this final internal quality control approval process has acted as a part of the Assessment Team or Technical Review team, the approval can only be given by DOE's personnel who are not part of those teams.

If the final set of documents has been satisfactorily approved, a request of renewal of PoA Period is submitted to the UNFCCC CDM EB along with the relevant documents.

**SECTION F. Validation opinion**

&gt;&gt;

LGAI Technological Center, S.A. (Applus+ Certification) has performed the validation assessment for the updated Programme of Activities Design Document (PoA-DD) valid for the 2<sup>nd</sup> 7-year period for the registered CDM programme of activities titled “*PoA for the Reduction of emission from non-renewable fuel from cooking at household level*” in the context of its renewal of the PoA period (2<sup>nd</sup> Period starting on 30/11/2019 and ending on 29/11/2026). The programme of activities was previously registered by UNFCCC on 30/11/2012 as CDM programme of activities with UNFCCC ref. no. 7359 and is requesting first renewal of the 7-year renewable period.

The validation was performed in accordance with CDM Validation and Verification Standard for Programme of activities (VVS for PoAs<sup>01/</sup> version 02.0) and included the assessment of the following issues:

- Evaluation of impact(s) of new relevant national and/or regional policies, circumstances and regulations on the previously determined baseline for the confirmation of the validity of the previously derived baseline taking into account relevant guidance from the CDM Executive Board (CDM-EB) with regards to renewal of the PoA period at the time of requesting renewal of PoA period;
- Evaluation of the correctness of the application of the CDM baseline and monitoring methodologies *AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 10.1<sup>05/</sup> and AMS-III.AV “Low greenhouse gas emitting safe drinking water production systems” version 08.0<sup>06/</sup>* and applicable methodological tools in the updated PoA-DD;
- Assessment of calculations and reporting of estimates of emission reductions to be achieved by the programme of activities during the 2<sup>nd</sup> 7-year period.

The review of the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021, and the subsequently performed follow-up interviews with the CME, has provided the validation team appointed by Applus+ Certification with sufficient evidence to determine the validity of the original baseline scenario. The validation team confirmed that the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 correctly applies the selected CDM baseline and monitoring methodologies<sup>05//06/</sup> and applicable methodological tools.

As verified by the validation team, all explanations and justifications provided by the CME regarding information and assumptions added in the PoA-DD are deemed reasonable and acceptable.

In our opinion, the CDM PoA “*PoA for the Reduction of emission from non-renewable fuel from cooking at household level*” – UNFCCC Ref no. 7359 meets all the relevant requirements for the renewal of the PoA period. Hence Applus+ Certification recommends the renewal of the period of this PoA.



## Appendix 1. Abbreviations

Abbreviations	Full texts
Applus+ Certification	LGAI Technological Center, S.A. (Applus+ Certification) DOE E-0032
AS	Accreditation Standard
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification request
CME	Coordinating/Managing Entity
CMP	The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DOE	Designated Operational Entity
EB	Executive Board
EI	External Individual
FAR	Forward Action Request
GHG	Greenhouse gas(es)
HQ	Headquarters (Applus+ Certification)
IR	Internal Resource
MoC	Modalities of communication
OE	Outsourced Entity
PCP for PoA	Project Cycle Procedure for Programmes of Activities
PoA-DD	Programme of Activities Design Document
PRC	Post Registration Changes
PS for PoA	Project Standard for Programmes of Activities
RCP	Renewal of Crediting Period
UNFCCC	United Nations Framework Convention on Climate Change
VVS for PoA	Validation and Verification Standard for Programmes of Activities

## Appendix 2. Competence of team members and technical reviewers

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed an assessment team in compliance with the Contract Review and Assessment Team appointment rules in the internal Quality Management System of Applus+ Certification as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of the Assessment Team has been approved by Applus+ Certification during the Contract Review process ensuring that the required skills and capabilities are covered.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scope / Technical Area required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

Name	Role	SS/TA Knowledge	Financial Expertise	Attendance to on-site visit
Mr. Agustín Calle	LA / TE / TEiT (1.1)	YES (3.1)	n/a	n/a
Mr. Vivek K. Ahirwar	A / TE	YES (1.1/3.1)	n/a	n/a
Mr. Simon Shen	TR / TE	YES (1.1/3.1)	n/a	n/a

A brief Curriculum Vitae (CV) of the Assessment Team members is provided below:

### Mr. Agustín Calle:

Mr. Agustín Calle has a Bachelor's Degree on Environmental Sciences and Master's Degree on Environmental Control and Management in Companies.

He has more than 9 years of experience on CDM, sustainability, implementation, outsourcing and audit of Management Systems, waste handling and renewable energies consultancy services, as well as an active participation in Spanish Normalisation Committees for sustainability standards, among other activities.

In Applus+ since July 2017, being the Technical Manager and Quality Manager for CDM/VCS/GS4GG Department to ensure quality performances, coordinate global team and maintenance of the Accreditations as well as to perform the final reviews for all the projects before their approval and submission for quality assurance purposes.

Mr. Agustín Calle is qualified as Lead Auditor for Validation and Verification activities by Applus+ Certification as well as is qualified as Technical Expert in Sectoral Scopes/Technical Areas 3.1 and 1.2 by the same entity, hence having participated in various GHG Assessments under the UNFCCC CDM/VCS/GS4GG schemes.

**Mr. Vivek Kumar Ahirwar:**

Mr. Vivek Kumar Ahirwar has done Master in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor's Degree of Engineering (Mechanical Engineering) from Govt. Engineering college, Rewa, RGPV, India.

He is a BEE-Certified Energy Auditor by Govt. of India with over 8 years of relevant experience in energy efficiency, energy audit and energy conservation in energy intensive industries, designated consumers and commercial buildings, as well as implementation of energy conservation building codes, research, process and green building projects.

He is also a certified lead auditor for ISO 14001 EMS and ISO 14064.

He has experience under various categories of projects starting from renewable energies, energy efficiency, waste handling and disposal to supercritical projects and WCD.

He has successfully audited hundreds of emission reduction projects worldwide in schemes like UNFCCC CDM, VCS or Gold Standard.

**Mr. Simon Shen:**

Mr. Meng Shen holds a Master's Degree in Thermal Energy Engineering and Bachelor's Degree in Environmental Engineering.

He is a qualified auditor appointed by Applus+ Certification for the GHG project assessment, auditing and technical review.

He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of experience working as GHG Auditor and ISO 9001/14001 in TUV SUD before he joined Applus+ for 3.5 years.

Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager.

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	UNFCCC	CDM Validation and Verification Standard for Programmes of Activities version 02.0	29/11/2018	Other
2	UNFCCC	CDM Project Standard for Programmes of Activities version 02.0	29/11/2018	Other
3	UNFCCC	CDM Project Cycle Procedure for Programmes of Activities version 02.0)	29/11/2018	Other
4	UNFCCC	CDM Accreditation Standard version 07.0	01/03/2018	Other
5	UNFCCC	AMS I.E - Switch from non-renewable biomass for thermal applications by the user (Version 10.1)	28/11/2019	Other
6	UNFCCC	AMS-III.AV - Low greenhouse gas emitting safe drinking water production systems (Version 08.0)	28/03/2019	Other
7	UNFCCC	General guidelines for SSC CDM methodologies (version 23.0)	12/09/2019	Other
8	UNFCCC	Guidelines for the consideration of interactive effects for the application of multiple CDM methodologies for a programme of activities (version 01.0)	20/07/2012	Other
9	UNFCCC	Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (version 02.1)	03/12/2012	Other
10	UNFCCC	Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (version Version 03.0.1)	02/03/2012	Other
11	UNFCCC	Standard: Sampling and surveys for CDM project activities and programme of activities (version 08.0)	28/11/2019	Other
12	UNFCCC	Tool 30: Calculation of the fraction of non-renewable biomass (version 02.0)	28/03/2019	Other
13	UNFCCC	CDM-PoA-DD-FORM CDM programme of activities design document form (version 09.0)	31/05/2019	Other
14	UNFCCC	Registered Version of the PoA-DD (version 23)	22/08/2019	Other
15	CME	Initial PoA-DD for RCP version 24 Intermediate versions of the PoA-DD	01/10/2019 -	Other

		Final version of PoA-DD for RCP version 29	25/01/2021	
16	CME	End User Agreement Templates	-	CME
17	UNFCCC	Modalities of Communication in CDM Website and CME/PPs names and details	-	Other

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

Table 1. CL from this validation

<b>CL ID</b>	01	<b>Section no.</b>	D.1.4.	<b>Date:</b> 22/10/2019
<b>Description of CL</b>				
<i>The CME shall clarify if the Post-Registration Changes referred in the Appendix 7 of the proposed PoA-DD provided for Renewal of Crediting Period are approved by the UNFCCC as the changes do not appear in the UNFCCC CDM PoA Webpage.</i>				
<b>Project participant response</b>				<b>Date:</b> 28/10/2019
PoA DD version 23 was submitted to the CDM Secretariat by DOE, KBS, as part of request for issuance for Monitoring period. PoA DD version 23 was submitted to the CDM Secretariat by KBS on 23 <sup>rd</sup> of September 2019. The PoA DD version 23 is not expected to be uploaded to the CDM web page until the CDM Secretariat has completed the issuance request process. As the CDM issuance process in which the CDM Secretariat takes a lot longer than the time implied that this should take in accordance with the latest version of the PRC for PoA, the PoA DD version 23 has not been uploaded by the time we had to proceed with the PoA DD version 24 as part of the renewal of the PoA period				
<b>Documentation provided by project participant</b>				
<ul style="list-style-type: none"> <li>• PoA DD version 23</li> <li>• Mail confirming receipt of request for issuance PoA 7359</li> <li>• PoA 7359 verification report</li> <li>• PoA DD version 23 with Track changes</li> <li>• PoA PRC validation Report</li> </ul>				
<b>DOE assessment</b>				<b>Date:</b> 15/11/2019
The DOE confirms that the Request for PRC has been submitted and its status is actually pending for UNFCCC approval as does not appear in the PoA public workflow.				
The DOE has checked the documentation provided by the CME and found it correct.				
However, the DOE cannot validate Appendix 7 of the proposed PoA-DD provided for Renewal of Crediting Period until the PRCs described are approved by the UNFCCC.				
Hence, the CL remains open until confirmation of approval from the UNFCCC.				
<b>Project participant response</b>				<b>Date:</b> 03/04/2020
PoA DD version 23 was approved on 2 <sup>nd</sup> of April 2020.				
<b>Documentation provided by project participant</b>				
<a href="https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view">https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/2XJUR5NOWHY7T8BDAFM4613CIG9VS0/view</a>				
<b>DOE assessment</b>				<b>Date:</b> 03/04/2020
The DOE confirms that the PRC and PoA-DD version 23 has been approved by the UNFCCC CDM on 02/04/2020 and it is also visible in the following link: <a href="https://cdm.unfccc.int/PRCContainer/DB/prcp76283362/view">https://cdm.unfccc.int/PRCContainer/DB/prcp76283362/view</a>				
Hence, the CL is closed.				

<b>CL ID</b>	02	<b>Section no.</b>	D.2.2.	<b>Date:</b> 22/10/2019
<b>Description of CL</b>				

<p><i>The CME is requested to clarify the decision to update the applied methodological tool for assessment of additionality as stated in the PoA-DD provided for Renewal of Crediting Period (updated from “Guidelines of the demonstration of additionality of small-scale project activities” to “Tool 21 - Demonstration of additionality of small-scale project activities, version 12”) as this is not requested as stated in the Project Standard for Programmes of Activities (version 02.0) Para 285.</i></p>	
<b>Project participant response</b>	<b>Date:</b> 28/10/2019
<p>The change was incorrect. The reference in the PoA DD is changed back to Guidelines of the demonstration of additionality of small-scale project activities.</p>	
<b>Documentation provided by project participant</b>	
PoA DD version 25	
<b>DOE assessment</b>	<b>Date:</b> 15/11/2019
<p>The DOE, through review of the provided PoA-DD version 25, still detects that the additionality section has been updated to consider <i>Tool 21 - Demonstration of additionality of small-scale project activities, version 12</i> instead of the originally considered “Guidelines of the demonstration of additionality of small-scale project activities”, thus updating the additionality section.</p> <p>The CME is still requested to clarify the decision to update this Section.</p> <p>Hence, the CL remains open.</p>	
<b>Project participant response</b>	<b>Date:</b> 28/11/2019
<p>The reference in the PoA DD is changed back to Guidelines of the demonstration of additionality of small-scale project activities, as was stated in the registered PoA DD.</p>	
<b>Documentation provided by project participant</b>	
PoA DD version 26	
<b>DOE assessment</b>	<b>Date:</b> 12/01/2020
<p>The DOE through review of the provided PoA-DD version 26 confirms section for the demonstration of the additionality has not been revised for the renewal.</p> <p><b>Hence, the CL is closed.</b></p>	

<b>CL ID</b>	03	<b>Section no.</b>	D.2.5.	<b>Date:</b> 22/10/2019
<b>Description of CL</b>				
<p><i>The CME shall clarify how has updated the Eligibility Criteria in line with PS for PoA 02.0 Para 284.</i></p> <p><i>Moreover, the CME shall clarify how the provided End User Agreement template fulfills the condition stated in the Eligibility Criteria no.2 stating that: “A contract with all the participating households will confirm that the households are not part of any other system that generates carbon credits”. Same is applicable to the Eligibility Criteria no. 16.</i></p>				
<b>Project participant response</b>				<b>Date:</b> 29/10/2019
<p>EC has been updated.</p> <p>The contract with the participating households includes a section where it is stated that the participating households confirms that they are not part of any other carbon credit program or project.</p>				
<b>Documentation provided by project participant</b>				
<ul style="list-style-type: none"> <li>PoA DD version 25</li> <li>Example of end user agreement in paper format. End-user agreement Samsung</li> </ul>				
<b>DOE assessment</b>				<b>Date:</b> 15/11/2019

Concerning the clarification in regards of the *End User Agreement template*, the CME has provided to the DOE an updated template that includes an statement to be agreed by the end user, that says the following: *"The household is not part of any other program or project in which carbon credits are generated from the same solutions as provided through this program"*.

This is in line with the *Eligibility Criteria no.2* and *Eligibility Criteria no.16* as stated in the PoA-DD version 25 provided as a response to this clarification, thus accepted by the DOE.

Regarding the update of other Eligibility Criteria, the CME is requested to clarify:

1. How has updated the Eligibility Criteria no.5 in line with the PS for PoA 02.0 Para 284 regarding the applicability criteria of the applied version of the methodology AMS I.E "Switch from non-renewable biomass for thermal applications by the user" version 09.0.
2. If there will be a supportive evidence for inclusion of a CPA in the case of the requirement set out in Eligibility Criteria no.5b to check if a public distribution network supplying SDW to the project boundary does not exist.
3. How is considering the eligibility criteria minimum contents as specified in the PS for PoA 02.0 Para 124 (c).

Hence, the CL remains open.

<b>Project participant response</b>	<b>Date:</b> 28/11/2019
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1. The Eligibility Criteria have been updated to include the applicability conditions.
2. The Eligibility Criteria has been updated and now is inline with the methodology and the footnote 4.
3. Eligibility criteria 17 has been updated to specify that the CPA is not a deregistered CPA.

<b>Documentation provided by project participant</b>
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PoA DD version 26
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<b>DOE assessment</b>	<b>Date:</b> 12/01/2020
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The DOE confirms that the provided PoA-DD version 26 has:

1. Updated the Eligibility Criteria no.5a in order to mention the methodology AMS-I.E. Although the Eligibility Criteria no.5a is not defining all the applicability conditions of the methodology AMS-I.E, the rest of the missing applicability conditions have been now included within the Eligibility Criteria no.3. Hence accepted.
2. Updated the Eligibility Criteria no.5b in order to include all the applicability conditions of the applied version of the methodology AMS-III.A.V. The CME provides also the class of evidences that will be needed in order to check these conditions at the time of including a CPA-DD in the PoA. This is found acceptable by the DOE.
3. Updated the Eligibility Criteria no.17 in line with the requirements of PS for PoA 02.0 Para 124 (c). This is found acceptable by the DOE.

Hence, the CL is closed.

<b>CL ID</b>	04	<b>Section no.</b>	D.2.1.	<b>Date:</b> 15/11/2019
<b>Description of CL</b>				
<p>The CME is requested to clarify how the water treatment technologies considered in the Generic CPA qualify as Small Scale Type I project as per the PS for PoA Para 126 (a).</p> <p>The CME has indicated in the Section H.3. of the proposed PoA-DD version 25 that the Generic CPA qualifies as Type I SSC, however it is not clear about the deployment of renewable energies for water treatment systems that fulfill conditions stated in PS for PoA Para 126 (a).</p>				
<b>Project participant response</b>				<b>Date:</b> 28/11/2019



The PoA DD has been corrected with regards to the small-scale threshold for the water solutions in which Emission reduction is claimed in accordance with AMS III.AV. The small-scale project type in which determine the Small-scale threshold for water system is type II. The drinking water solutions reduce power consumption by reducing the need for boiling water, and hence the power consumption is reduced relative to the baseline scenario. Hence this is determined as Type II small scale threshold.

Section H.3 of the PoA DD has also been updated accordingly.

#### Documentation provided by project participant

PoA DD version 26.

#### DOE assessment

Date: 12/01/2020

The DOE through review of the provided PoA-DD version 26 confirms that the CME determines the qualification as Type II for the water treatment technologies and has updated the section H.3. accordingly.

Hence, the CL is closed.

CL ID	05	Section no.	D.2.1.	Date: 15/11/2019
<b>Description of CL</b>				
<p><i>The CME is requested to clarify how has considered the application of multiple small-scale methodologies as per PS for PoA 02.0 Para 93 and provide the assessment on these requirements in Section I.3. of the proposed PoA-DD as required in CDM-PoA-DD-FORM version 09.0 template's instructions ("If multiple methodologies are applied, demonstrate that all associated conditions for application of multiple methodologies in the project standard are met, including those relating to cross effects").</i></p>				
<b>Project participant response</b>				Date: 28/11/2019
<p>CME has clarified the application of multiple small-scale methodologies and confirmed that there is no crossover effect in section I.3 of the PoA DD. This was also clarified in section A.1 in the registered PoA DD.</p>				
<b>Documentation provided by project participant</b>				
PoA DD version 26				
<b>DOE assessment</b>				Date: 12/01/2020
<p>The DOE through review of the provided PoA-DD version 26 confirms that the CME has updated the Section I.3. of the PoA-DD and explained the use of multiple methodologies.</p> <p>However, it is still not clear how the CME demonstrates that there are no cross effects in line with the PS for PoAs 02.0 Para 94 (a) (read along with Appendix 1 of the PS for PoAs 02.0).</p> <p>Hence, the CL remains open.</p>				
<b>Project participant response</b>				Date: 09/02/2020

The PoA utilizes two different methodologies and deploys two different measures/technologies. Both rely on the same baseline, i.e, use of non-renewable biomass for cooking and boiling water. In the two technologies, HHs will utilize an ethanol stove for boiling water, if there is no alternative of a water purification system. In case a HH benefits from the thermal technology, the use of one technology leads to a reduction in the baseline use, and the need for a water purification system. Therefore, there is no interactive effects that lead to overestimation of emission reductions. The parameter  $QWP_y$ , is measured ex-post, and will show the average quantity of water purified under AMS-III.AV, and the quantity of  $ET_{Usage,y}$  utilized ex-post will lead to a corresponding reduction in baseline emission calculations and vice versa. Besides, the SDW solution was initially part of AMS-I.E.

Section I.3 has been updated accordingly

It should be pointed out that even though the PoA is now using two methodologies, there are no new solutions being included in the PoA. The technologies in which ER may be claimed from this PoA are now only two compared to the registered PoA DD and the CDM EB has approved the registered PoA DD as not having any crossover effect.

Furthermore the PoA DD also specify that ER will only be claimed from one technology from a households selected for monitoring even if the household selected for monitoring is found to have been provided with both ethanol stove and drinking water solutions. This to further reduce the issue of crossover effect.

#### Documentation provided by project participant

PoA DD version 26.1

#### DOE assessment

Date: 03/04/2020

The CME now provides in its revised PoA-DD an assessment on the cross effects that contains enough information and statements to consider it as acceptable to the DOE. Also the CME provides conservative measures in order to a potential cross effect not leading to the overestimation of claimed ERs in a given CPA.

Hence, the CL is closed.

CL ID	06	Section no.	D.2.4.	Date: 15/11/2019
<b>Description of CL</b>				
<p>The CME is requested to clarify how is going to determine the Parameter <math>P_y</math>, as in the PoA-DD Section I.6.1. is provided a method based on multiplying two variables (one determined ex-ante) and the Section I.7.1. refers to a survey.</p> <p>Moreover, the Section I.7.1. table for <math>P_y</math> parameter refers to an annual survey (measurement methods) and to an "at least every two years" survey (monitoring frequency) in the same table, please clarify.</p>				
<b>Project participant response</b>				Date: 28/11/2019
<p>Section I.6.1 has been corrected to refer to number of people in each household as determined by monitoring survey. The value of <math>P_y</math> is hence determined by the average number of people in each household multiplying with the number of households provided with drinking water. Neither of these values are ex-ante. The average people in each household provided with drinking water is determined by monitoring survey and the number of households provide with drinking water during each monitoring period, is determined by the database for project households.</p> <p>Section I.7.1' has been corrected.</p>				
<b>Documentation provided by project participant</b>				
PoA DD version 26				
<b>DOE assessment</b>				Date: 16/01/2020
<p>The DOE after reviewing the revised PoA-DD concludes that the monitoring frequency of the parameter <math>P_y</math> is not in accordance with the provisions in the applied version of the methodology.</p> <p>Hence, the CL remains open.</p>				
<b>Project participant response</b>				Date: 03/07/2020
The frequency has been revised to annual in line with the applied methodology				

Documentation provided by project participant	
PoA-DD version 28.0	
DOE assessment	Date: 28/07/2020
The DOE after reviewing the revised PoA-DD confirms the corrective action has been applied accordingly.	
<b>Hence, the CL is closed.</b>	

CL ID	07	Section no.	D.2.3.	Date: 15/11/2019
Description of CL				
<p>The CME is requested to clarify the purpose and use of the parameter determined ex-ante <math>C_{CF}</math>, as no information is provided in Section I.6.2., neither is a parameter considered in the applied version of the methodology(ies) and it is introduced in <math>B_{y,Biogas}</math> and <math>B_{y,Denatured\ alcohol}</math> calculation formulas.</p>				
Project participant response				Date: 28/11/2019
<p>The Value of <math>C_{CF}</math> is used in the formula for calculation of ER in the PoA. CME had to make several adjustments to the calculations of ER relative to what is described in the methodologies, and this has been validated by a DOE as part of the initial registration of the PoA, Validated by a separate DOE as part of each CPA inclusion, Verified by 3 different DOEs as part of the verification processes, and have been approved by the CDM EB both during registration of the PoA DD and as part of the issuance processes. These adaptations of the calculations, which has been made include:</p> <p>Formula that is not explicitly stated in the methodology but approved by CDM EB and DOEs:</p> $BE_y = BE_{y,Denatured\ alcohol} + BE_{y,Biogas} + BE_{y,Water}$ <p>This formula is used, even if not explicitly referred to in the methodology, to account for the ER for all the 3 solutions in which ER might be achieved.</p> $B_{y,Denatured,ethanol} = (((HG_{p,y,Denatured\ alcohol} / (NCV_{Biomass} * \eta_{old})) * (1 - C_P)) + ((HG_{p,y,Denatured\ alcohol} / (NCV_{Charcoal} * \eta_{old})) * (C_P * C_{CF}))) * LF$ <p>This formula is based on formula 1 in AMS I.E version 04, and equation 6 in AMS I.E version 10. The formula requirements are the same for version 04 and 10 of the methodology.</p> <p>The formula that is used in the registered PoA DD was adapted to account for leakage (5% in accordance with the methodology) and to account for the different emission from wood and charcoal. In order to account for the different emission from wood and charcoal, the formula has to account for the portion of fuel replaced that was used as wood and how much of the fuel replaced was used as charcoal. Furthermore, the formula had to account for the portion of wood needed to produce one unit of charcoal (<math>C_{CF}</math>) had to be included in the formula. The same adaption is used for all the solutions that replace the use of woody biomass for cooking.</p> <p>The value <math>C_{CF}</math> as well as the value <math>C_P</math> are included in the PoA DD section I.6.2</p> <p>The reference to a charcoal conversion factor is explicitly stated in paragraph 28 of AMS I.E version 10, and it is understood that this has to be used as a parameter if to be used in accordance with paragraph 28, even though this parameters is not listed as part of the parameters that should be used in accordance with the methodology.</p>				
Documentation provided by project participant				
PoA DD version 26				
DOE assessment				Date: 16/01/2020
<p>The CME has clarified the use and approach to select the conversion factor.</p> <p>The DOE considers the clarification acceptable.</p> <p><b>Hence, the CL is closed.</b></p>				

CL ID	08	Section no.	D.2.3.	Date: 15/11/2019
Description of CL				

<i>The CME is requested to clarify the purpose and use of the parameter <math>Y_y</math> which is indicated in the Section I.6.3. Step 2 as a monitored parameter, but does not correspond to a parameter included in the monitoring plan.</i>	
<b>Project participant response</b>	<b>Date:</b> 28/11/2019
<p>The value has been corrected to <math>P_y</math>. This is the number of people provided with drinking water as part of the program.</p> <p>It has been further clarified that the value "Total number of people provided with drinking water -<math>P_y</math>", is not used for calculation of ER. It is the <math>P_y</math> value for each household monitored (number of people in each household that is monitored) that is used for calculation of the ER for the specific household that has been monitored. Total ER is then calculated based on the average ER from the households that has been monitored.</p> <p>CME would point out that the process of calculating ER from household that is monitored and then multiply the average of these values with the total number of households has been approved by the registered PoA DD.</p>	
<b>Documentation provided by project participant</b>	
<i>PoA DD version 26</i>	
<b>DOE assessment</b>	<b>Date:</b> 16/01/2020
<p>The DOE through review of the provided PoA-DD version 26 confirms that the CME has clarified that the parameter <math>Y_y</math> was really <math>P_y</math> and it has applied a correction in the nomenclature.</p> <p><b>Hence, the CL is closed.</b></p>	

<b>CL ID</b>	09	<b>Section no.</b>	D.2.4.	<b>Date:</b> 15/11/2019
<b>Description of CL</b>				
<i>The CME is requested to clarify the purpose and use of the parameters <math>BG_{stove, Capacity, y}</math> and <math>ET_{stove, Capacity, y}</math> present in the monitoring plan, not used along the calculation of Emission Reductions.</i>				
<b>Project participant response</b>				<b>Date:</b> 28/11/2019
<p>These values are needed to calculate total thermal capacity, which is needed to determine if total thermal capacity is within the small-scale limitation (45 MW in total thermal output of capacity of stoves provided to all households registered in a CPA).</p> <p>Nonetheless, we have removed them and others not necessary for ER calculations in the revised PoA-DD version 26.0 and added more text in section I.2 of the PoA-DD.</p>				
<b>Documentation provided by project participant</b>				
<i>PoA DD version 26</i>				
<b>DOE assessment</b>				<b>Date:</b> 16/01/2020
<p>The CME has clarified the use and approach for the parameters.</p> <p>The DOE considers the clarification acceptable.</p> <p><b>Hence, the CL is closed.</b></p>				

<b>CL ID</b>	10	<b>Section no.</b>	D.2.1.	<b>Date:</b> 15/11/2019
<b>Description of CL</b>				

The CME is requested to clarify the purpose and use of the following:

- Tool 22: Leakage in biomass small-scale project activities, version 04;
- General guidance on leakage in biomass projects", EB 47, Annex 28;

in the monitoring plan and the Appendix 5, respectively, and its consistency with the provisions stated in current versions of applied methodologies when making reference to the Leakage and Project Emissions.

Additionally, the CME is requested to clarify how is accounting for Leakages in the water treatment systems as it is not clear in the Section I.6.3. Modalities for ex ante calculation of emission reductions.

<b>Project participant response</b>	<b>Date:</b> 28/11/2019
The reference has been corrected to Tool 16 <i>Project and leakage emissions from biomass</i> .	
Leakage emission is 5% as allowed by the methodology AMS-I.E.	
The leakage from households provided with clean drinking water has been accounted for by adding the leakage factor (LF) to the formula.	
The leakage factor (LF) used is the default leakage factor of 5% (e.g multiplied with 0.95). This is in accordance with the option chosen from methodology AMS I.E version 09, in which AMS III.AV refer to in paragraph 21.	
Appendix 5 has also been deleted as no project emissions are envisaged under the generic CPA-DD	
<b>Documentation provided by project participant</b>	
PoA DD version 26	
<b>DOE assessment</b>	<b>Date:</b> 16/01/2020
The DOE after reviewing the revised PoA-DD and the response provided concludes the clarification from CME is enough and found acceptable.	
<b>Hence, the CL is closed.</b>	

<b>CL ID</b>	11	<b>Section no.</b>	D.2.1.	<b>Date:</b> 15/11/2019
<b>Description of CL</b>				
The CME is requested to clarify how the proposed test of water samples is consistent with the provisions set out in the AMS-III.AV version 07.0 Para 4(b).				
<b>Project participant response</b>				<b>Date:</b> 28/11/2019
The PoA DD has been updated with regards to the test of the water sample so as to be in compliance with the above-mentioned Paragraph 4 (b).				
The water quality will be tested by a laboratory in line with the specified WHO standards, or national standards and guidelines.				
<b>Documentation provided by project participant</b>				
PoA DD version 26				
<b>DOE assessment</b>				<b>Date:</b> 12/01/2020
The DOE through review of the provided PoA-DD version 26 confirms that the CME has updated the Section I.7.3. where corresponding to the safety water tests and specifies will be done as per the requirements of the applied methodology..				
<b>Hence, the CL is closed.</b>				

<b>CL ID</b>	12	<b>Section no.</b>	D.2.1.	<b>Date:</b> 15/11/2019
<b>Description of CL</b>				

<i>The CME is requested to clarify how is following the provisions set out in PS for PoA v02.0 Para 235 and Para 236 to do not apply the mandatory default values set out in the current version of the applied methodology(ies) for the determination ex ante of the parameters EF<sub>projected_fossilfuel</sub> and EF<sub>projected_fossilfuel,i</sub>.</i>	
<b>Project participant response</b>	<b>Date:</b> 28/11/2019
<p>The values referred to in the methodologies refer to fossil fuel. It is however determined that the baseline scenario is not fossil fuel but biomass.</p> <p>The default value has been removed in the latest and applicable version of the methodology AMS-I.E version 10.</p> <p>CME has updated the PoA DD so that it no longer refers to a value that differ from the value referred to in the methodology. Rather the PoA DD specify that the value shall be determined in the CPA DD.</p> <p>CME has also changed the reference to different values / parameters for and EF<sub>projected_fossilfuel</sub>, and the PoA DD now only refers to once such parameter</p>	
<b>Documentation provided by project participant</b>	
PoA DD version 26	
<b>DOE assessment</b>	<b>Date:</b> 12/01/2020
<p>The DOE through review of the provided PoA-DD version 26 confirms that the CME has applied the latest version of the methodology AMS-I.E. (version 10.0) instead of initially considered version 09.0.</p> <p>The new version of the methodology permits the determination by regional values or a formula for the parameter EF<sub>projected_fossilfuel</sub>, and the latest version of the methodology AMS-III.A.V. refers to the provisions set out in the AMS-I.E., hence the DOE considers the same reasonably applicable for the use under the AMS-III.AV and for the particular determination for each single CPA.</p> <p><b>Hence, the CL is closed.</b></p>	

Table 2. CAR from this validation

<b>CAR ID</b>	01	<b>Section no.</b>	D.2.2.	<b>Date:</b> 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME is requested to apply the latest available version of the "Methodological Tool - Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period".</i></p> <p><i>The CME is requested to provide evidences of the assessment of the validity of the original/current baseline and update of the same in the PoA-DD as corresponding, including, but not limited to, the statement described in Section A.1. saying that "all applicable national and/or sectoral policies and regulations within the countries included in the PoA" have been considered.</i></p>				
<b>Project participant response</b>				<b>Date:</b> 29/10/2019

Most of the baseline values are to be specified in the CPAs, and this applies for all baseline values that are considered to be different from one CPA to another.

The statement “*all applicable national and/or sectoral policies and regulations with the countries included in the PoA*” is determined and validated at the time of inclusion of a new country in the PoA or when including a new CPA in a country in which no previous CPAs has been registered as part of the PoA.

The only baseline values that are determined in the PoA-DD, rather than in the CPA DD, are:

- $EF_{\text{projected\_fossilfuel}}$ . This value is defined in the methodology
- $NCV_{\text{biomass}}$ . This value is defined in the Methodology
- $NCV_{\text{Denatured alcohol}}$ . This value is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventory, combined with default density of ethanol.
- $NCV_{\text{Biogas}}$ . IPCC Default value.
- LF (Leakage Fraction). Default value in Methodology
- Thermal output of water purification system. Defined as 0.5. No conditions has changed that justify using this conservative value. The value is not used for calculating ER, but only to ensure that each CPA remain with the small scale threshold.

None of the above baseline values that are determined in the PoA-DD have changed in any of the included host countries since the registration of the PoA DD. The validity of the current baseline for the next period of the PoA is therefore unchanged.

It is not possible to prove a negative statement that there is no law stating that there is any law saying that there it is not allowed to provide drinking water to people or to provide stoves using renewable energy to people. Such statements will be confirmed at the time of inclusion of a new host country into the PoA, or when registering or renewing the crediting period of a CPA that is part of the PoA

#### Documentation provided by project participant

PoA DD version 25

#### DOE assessment

Date: 15/11/2019

The DOE, after the assessment of the responses and provided PoA-DD version 25, requests the CME to further provide response on:

1. How has considered the Methodological Tool, Section II Step 1.1 to assess the compliance of the current baseline with relevant mandatory national and/or sectoral policies.
2. How has CME considered potential updates of the IPCC documents (e.g. the “*2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*”) when evaluating the validity of the current baseline scenario in accordance with the Methodological Tool, Section II Step 1.4.
3. How provides in the PoA-DD for Renewal of Crediting Period evidences of having assessed the validity of previous baseline scenario and a confirmation about it outcomes.

Hence, the CAR remains open.

#### Project participant response

Date: 28/11/2019

The baseline does not need to be re-assessed, in line with §288 of the *CDM project standard for programmes of Activities\_V2.0*. Instead, the CME shall assess the modalities to calculate GHG emission reductions or net anthropogenic GHG removals that would have resulted from that scenario.

Since the PoA boundary spans multiple countries, the PoA-DD version 26.0 has been updated to prescribe the way the GHG emission reductions are to be determined based on the latest version of the methodologies and the applicable tools. The eligibility criterion #18 has therefore been added to address the issue of baseline validity assessment and national policies that could affect the same.

Values that are not default values directly prescribed by the applied methodologies, and that are used to calculate the baseline will be determined at CPA inclusions or renewal of their crediting periods, in the respective CPA-DDs. As such relevant baseline parameters that might change based on confirmed validity in accordance with Methodological tool “*Assessment of the validity of the original / current baseline and update of baseline at the renewal of the crediting period*” are primarily the values that need to be updated as part of the process of inclusion or renewal of the crediting period of CPAs. .

#### Documentation provided by project participant

PoA DD version 26

#### DOE assessment

Date: 12/01/2020

The DOE agrees with the CME about the baseline scenario is not to be reassessed at the time of renewal of PoA period. The DOE would like to clarify this was not the reason of the finding, instead:

1. The CME in this version of the revised PoA-DD applies a new eligibility criteria (no.18) in order to demonstrate at CPA Level the validity of the baseline scenario at the time of its period renewal, hence found in line with the PS for PoA 02.0 Para 287 and accepted.
2. The CME now provides an explanation of the impact of the renewal of PoA Period in the baseline data/parameters in Section I.5. for which it is determined that the application of the TOOL 11 is not relevant at PoA Level and read along with the Eligibility Criteria no.18 will be determined at CPA Level. This is now found acceptable as per provisions in PS for PoA 02.0 Para 289 and 291.
3. The CME by doing so, will observe any updates in the IPCC guidelines at the time of renewal of CPA crediting period, hence accepted.

**Hence, the CAR is closed.**

CAR ID	02	Section no.	D.2.1.	Date: 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME is requested to correct the application of the methodology AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 09.0 for the water treatment technologies. As per provisions of EB 97 Para 31 (a) (v) the methodology AMS-III.AV has been put in place for such technology, being removed from AMS I.E since version 08.0.</i></p> <p><i>The assessment on the application of the methodology(ies) for all the aspects affected by the same along the PoA is placed on hold until the resolution of this finding.</i></p>				
<b>Project participant response</b>				<b>Date: 30/10/2019</b>
<p>CME has included methodology AMS-III.AV in the PoA DD.</p> <p>As a result, a large number of new parameters has to be included in the PoA DD, and part of the monitoring process had to be modified. The changes to the PoA DD version 25 is substantially changed as a result of this.</p> <p>CME has also developed two new Generic CPAs as a result of the inclusion of the new methodology.</p>				
<b>Documentation provided by project participant</b>				
<p>POA DD version 25</p> <p>Generic CPA Type 1</p>				
<b>DOE assessment</b>				<b>Date: 15/11/2019</b>
<p>The DOE confirms the CME has taken into account the methodology AMS-III.AV (version 07.0) in order to the implementation of the water treatment technologies as per decision taken in EB 97 Para 31 (a) (v). This is found acceptable.</p> <p>However, after review of the PoA-DD version 25 provided as a response for this CAR, and regarding the applicability/application of the methodology(ies) that was placed on hold until the resolution of the above, the CME is further requested to:</p> <ol style="list-style-type: none"> <li>1. Clarify the statement in the response above saying that “CME has also developed two new Generic CPAs”, as only one Generic CPA is described in the PoA-DD.</li> <li>2. Evaluate the compliance of each of the applicability criteria of the methodology AMS I.E “Switch from non-renewable biomass for thermal applications by the user” version 09.0 in Section I.2. of the PoA-DD.</li> <li>3. Consider the latest version of the methodology AMS-I.I referred in the table for the Parameter NCV<sub>biogas</sub> in Section I.6.2. of the proposed PoA-DD.</li> <li>4. Consider in Section I.5. the use of non-renewable woody biomass for boiling water in the establishment of the baseline scenario.</li> <li>5. Describe as well as for other parameters, in the aforementioned section of the PoA-DD, all the default values used to establish the baseline scenario as per the application of both methodologies.</li> </ol>				



6. Determine if the parameter  $f_{NRB}$  is established as per independent 3<sup>rd</sup> party as written in *Section I.5* and *Section I.6.3* or by the application of a tool, as written in *Section I.6.2*.
7. Provide data for the parameter  $f_i$  in accordance with the current version of the methodology *AMS-III.AV*.
8. Correct the information in the table for the parameter  $\eta_{wb}$  as purpose of data is described in row for choice of data and in row for purpose of data there is no mention to the allowed options as per template's instructions, but provides information to be contained in value(s) applied row.
9. Determine for the parameter  $QPW_{pp}$  if the value is going to be a default value as per given in the row for "Source of Data" or to be determined for each CPA as described in the row "Value(s) applied".
10. Provide data for the parameter  $X_{boil}$ , used in the equation to determine  $ER_{y,water}$ , in compliance with the applied methodology *AMS-III.AV* and monitoring plan/determination ex-ante as corresponding.
11. Review the inclusion of a formula's variable  $B_{y,PurifiedWater}$  as is not in accordance with the applied version of the methodology *AMS-III.AV* and review *Section I.6.3., Step 1*, accordingly.
12. Apply *AMS I.E "Switch from non-renewable biomass for thermal applications by the user" version 09.0* Para 33 when determining the confidence level of the sampling activities under the PoA.
13. Consider in the monitoring plan all the parameters of the applied methodology (*AMS I.E "Switch from non-renewable biomass for thermal applications by the user" version 09.0*) that are subjected to monitoring in accordance with the current version of the methodology.  
  
Further assessment on *Section I.7.1.* monitoring plan is placed on hold until the necessary parameters are included.
14. Determine, in accordance with the methodology *AMS-III.AV version 07.0* and the related tools, the way to calculate the Project Emissions in the monitoring plan, as these emissions are stated as to be calculated as per information provided in actual *Section I.7.3.* of the PoA-DD version 25.
15. Include the new applied methodology *AMS-III.AV version 07.0* in Appendix 3, consistently with the inclusion of the *AMS I.E version 09.0*.

Hence, the CAR remains open.

**Project participant response**

**Date:** 28/11/2019

1. CME would like to correct the statement given with regards to two generic CPAs. CME have only made 1 generic CPA for the program.
2. There are two main applicability criteria and the program complies with all of these.
  - a. Prior to implementation of the project activity a public distribution network supplying SDW to the project boundary does not exist.  
The CME understand this to mean that the project participating households do not have access to a SDW. It is the opinion of CME that a CPA might be included in a country even if a public network supplying SDW exist within this country, as long as large part of the households in the country do not have access to a SDW and the project only target the households that do not have access to the SDW. As such this is not an eligibility criterion, but something that is determined during the monitoring survey. It is understood that no ER should be claimed from supplying drinking water to households that has access to public distribution network supplying SDW. If this is not applicable then the CDM Rules in fact prevent the public to develop any public network providing SDW in a country, as this would prevent the private sector to finance water supply projects financed through carbon credits. CME believe that this is not the intention of the CDM EB related to the above rule.
  - b. The water will be tested as part of monitoring survey.
  - c. There is no such thing a lifespan of the deployed technology. The lifespan is dependent on the support and maintenance resources available. The income from sales of carbon credits generated is used to pay for such after sales support to ensure that the system remain operational for as long as possible. Lifespan of deployed technologies will as applicable, be determined at CPA level. The project will not claim any ER from systems that is not operational and providing drinking water that meet the required quality.
  - d. The quality of the drinking water is determined through laboratory testing as part of the monitoring survey.
3. The value  $NCV_{biomass}$ , in section I.6.2 has been updated. It is now to be determined in CPA DD. The value of  $NCV_{Charocal}$  is provided as a separate parameter, and hence  $NCV_{biomass}$  is understood to be wood only.
4. Section has been updated with reference to the use of non-renewable woody biomass for boiling water in the baseline scenario.
5. Section I.5 in the PoA DD version 25 has been updated with regards to the default values used to establish the baseline scenario.
6. The determination of the value  $f_{NRB}$  has been corrected in section I.5 and section I.6.1 in the PoA DD.
7.  $f_i$  has been included in section I.6.2 of the PoA DD.
8. Purpose of data in table I.6.2 has been corrected for variable  $\eta_{wb}$ .
9. The parameter  $QPW_{pp}$  has been corrected in section I.6.2. The value will be determined in the CPA.
10. The table for parameter  $X_{boil}$  has been corrected to the source of data being "Established ex ante through survey" as specified in the methodology.
11. The value  $B_{purifiedWater}$  has been taken out of the formula in step 1 of section I.6.3 of the PoA DD as this value is not used to calculate ER in accordance with AMS-III.AV version 07.
12. The require confidence level of the sampling plans has be updated in the PoA DD in line with §40 of the methodology.
13. The parameters listed in methodology AMS-I.E. version 10.0 and AMS-III.Av version 7.0 have been included in the list of parameters in the PoA in section I.6.2 and in section I.7.1 in the PoA DD.
14. The calculation of the project emission from water supply systems and the tools for such calculations has been included in section I.6.1 of the PoA DD in accordance with the Methodology AMS-III.AV version 07.
15. The methodology AMS-III.AV version 07 has been included in appendix 3 of the PoA DD. Methodology applicability is now in section I.2 of the revised PoA-DD

**Documentation provided by project participant**

PoA DD version 26

**DOE assessment****Date:** 12/01/2020

The DOE after the assessment of the revised PoA-DD concludes that:

1. CME has developed one Generic CPA and the same is found acceptable by the DOE.
2. CME has provided an opinion about the applicability conditions of the methodology AMS-III.AV., however, this part of the finding was referred to the applicability conditions of the methodology AMS I.E. and the corresponding analysis to be done in the Section I.2. of the PoA-DD. Corrective action is still sought for this issue.
3. CME has provided a response for the parameter  $NCV_{biomass}$ , however, the finding was related to the parameter  $NCV_{biogas}$ . Nevertheless, the parameter has been deleted in the latest provided version of the PoA-DD. Thus, there is no further query for the given parameter.
4. CME now considers the baseline scenario corresponding to the methodology AMS-III.AV., hence accepted.
5. CME has deleted the values and parameters used in the baseline scenario from Section I.5 of the revised PoA-DD. While the parameters are described and supported in other sections of the PoA-DD this is found acceptable by the DOE.
6. CME has deleted the references in Section I.5. Also has established in Sections I.6.1., I.6.2. and I.6.3. that the value of  $f_{NRB}$  will be determined ex-ante for the CPAs, either by a default published value by a DNA and approved by CDM EB or the application of the TOOL 30. This is found acceptable by the DOE.
7. CME has included as a part of the parameter  $f_{NRB}$  the parameter  $f_i$ . Given that the parameters are the same, this is found acceptable by the DOE.
8. The table for the parameter  $\eta_{wb}$  contains now the information for each row, thus found acceptable. However, the proposed is not in line with the methodology requirements. Corrective action is still sought for this issue.
9. The CME has applied the default value as prescribed by the methodology for the parameter. This is found acceptable.
10. The CME has applied the parameter as per requirements of the methodology, hence accepted.
11. The CME has applied the corrective action appropriately, hence accepted by the DOE.
12. The CME has elaborated the requirements for the confidence/precision level according to the methodology(ies) and applicable regulatory documents, hence accepted.
13. The CME has included parameters in Section I.6.2. and Section I.7.1. to be determined ex-ante and monitored.  
However, corrective action is still sought for the following:
  - a) Parameter determined ex-ante does not correspond to the methodological choices as stated in the PoA-DD.
  - b) Parameters to be determined ex-ante in accordance with the methodology are found to be incomplete.
  - c) Parameters to be determined in the monitoring plan in accordance with the methodology are found to be incomplete.
  - d) Monitoring Plan is not in accordance with the applied version of the methodologies.
14. The CME has included in Section I.6.1. appropriately the consideration of the project emissions. However, still there is an inconsistency between section I.6.1. and I.7.3 in the consideration of project emissions. Corrective action is still sought for this.
15. The CME has included appropriately the methodology in the Appendix 3 and evaluated the applicability conditions in Section I.2., thus accepted.

Hence, the CAR remains open.

**Project participant response**

**Date:** 03/07/2020

2. *The Applicability condition has been revised and basis for justification included in section I.2 of the PoA-DD*
8. The table for the parameter  $\eta_{wb}$  has been revised to align with the applied methodology monitoring requirements.
13. a) *Section I.6.2 has been revised to include only fixed parameters that align with the applied methodologies*  
 b) *Section I.6.2 has been revised to include only fixed parameters that align with the applied methodologies*  
 c) *Section I.7.1 the omitted parameter LS has been included in the latest PoA-DD*  
 d) *The monitoring plan has been revised to cover all provisions of AMS-I.E version 10.1, and AMS-III.AV version 08.0*
- The inconsistency between the sections has been revised. There will be no PE from the deployed project technologies*

**Documentation provided by project participant**

PoA-DD version 28.0

**DOE assessment****Date:** 28/07/2020

The Section I.2. has been revised and complies with the requirements, hence accepted.

The inconsistency in the treatment of project emissions between I.6.1 and I.7.3 has been amended.

The table of the parameter  $\eta_{wb}$  has been revised and is in accordance with the methodology, hence accepted.

Section I.6.2. has been revised and parameters determined ex-ante are in line with the requirements.

However, the monitoring plan is still inconsistent with the applied methodologies.

Hence, CAR remains open.

**Project participant response****Date:** 10/08/2020

*All required monitored parameters are now included in section I.7.1, in line with the methodological choices and equations in section I.6.1 and I.6.3.*

**Documentation provided by project participant**

Revised PoA-DD

**DOE assessment****Date:** 14/08/2020

The revised PoA-DD contains all the required parameters as per the applied methodology, thus accepted.

**Hence, the CAR is closed.**

<b>CAR ID</b>	03	<b>Section no.</b>	D.1.1.	<b>Date:</b> 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME provides a link in the Section A.2. of the proposed PoA-DD for Renewal of Crediting Period, that does not work.</i></p> <p><i>The CME is requested to provide a working link for the demonstration of the information provided in the Section A.2.</i></p> <p><i>Furthermore, the CME provides a link in the Section I.1. of the proposed PoA-DD for Renewal of Crediting Period, that does not work, to refer to the methodology.</i></p> <p><i>The CME is requested to provide a working link for the reference to the methodology provided in the Section I.1.</i></p>				
<b>Project participant response</b>				<b>Date:</b> 30/10/2019

*The web page referred in in the link in section A.2 has been removed. The link has hence also been removed from the PoA DD. There are no change to the coordinates in which the link referred to, compared to the latest approved and registered version of the PoA DD.*

*The link in section I.1 has been updated.*

<b>Documentation provided by project participant</b>	
PoA DD version 25	
<b>DOE assessment</b>	<b>Date:</b> 15/11/2019
<p>The DOE confirms through the review of the provided PoA-DD version 25 in response to this CAR, that the link in the Section A.2. has been removed. The DOE found it acceptable as it refers to average coordinates of the host countries.</p> <p>Concerning the link provided in Section I.1., it has been updated and the DOE confirms is adequate to make reference to the applied methodology, thus acceptable.</p> <p><b>Hence, the CAR is closed.</b></p>	

<b>CAR ID</b>	04	<b>Section no.</b>	D.1.1.	<b>Date:</b> 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME is requested to the following, in the proposed PoA-DD for Renewal of Crediting Period:</i></p> <ol style="list-style-type: none"> <li><i>1. Provide the information in Section J in accordance with the Project Standard for Programmes of Activities version 02.0 Para 122.</i></li> <li><i>2. Provide final start date of the PoA in the Section D.1., as the statement establishes two potential dates and the date of registration of the PoA is later that the proposed start date of the PoA as observed in the UNFCCC Webpage for the PoA.</i></li> </ol>				
<b>Project participant response</b>				<b>Date:</b> 30/10/2019
<ol style="list-style-type: none"> <li><i>1. Section J has been corrected.</i></li> <li><i>2. The start date of the PoA in section D.1. has been updated.</i></li> </ol>				
<b>Documentation provided by project participant</b>				
PoA DD version 25				
<b>DOE assessment</b>				<b>Date:</b> 15/11/2019
<p>The DOE, by reviewing the PoA-DD version 25 provided in response to this CAR, confirms that the information provided in Section J is in accordance with the Project Standard for Programmes of Activities version 02.0 Para 122, thus accepted.</p> <p>Regarding the start date of the PoA in Section D.1., the DOE confirms is consistent with the start date of the PoA as reflected in UNFCCC Webpage for the PoA, thus accepted.</p> <p><b>Hence, the CAR is closed.</b></p>				

<b>CAR ID</b>	05	<b>Section no.</b>	D.1.3.	<b>Date:</b> 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME is requested to provide the information in Section A.5. and Appendix 1 of the proposed PoA-DD for Renewal of Crediting Period in accordance with the currently approved Project Participants for the PoA as appearing in the UNFCCC CDM PoA Webpage and registered MoCs.</i></p>				
<b>Project participant response</b>				<b>Date:</b> 30/10/2019
Section A.5 and Appendix 1 has been updated				
<b>Documentation provided by project participant</b>				
PoA DD version 25				

<b>DOE assessment</b>	<b>Date:</b> 15/11/2019
<p>The DOE, through review of PoA-DD version 25 provided in response to this CAR, confirms that the <i>Section A.5.</i> and <i>Appendix 1.</i> have been updated to show the current project participants as per the participants shown in MoCs appearing in the UNFCCC CDM PoA Webpage.</p> <p><b>Hence, the CAR is closed.</b></p>	

<b>CAR ID</b>	06	<b>Section no.</b>	D.1.1.	<b>Date:</b> 22/10/2019
<b>Description of CAR</b>				
<p><i>The CME is requested to comply with the given instructions for completion of the form CDM-PoA-DD-FORM version 09.0, the following Sections of the PoA-DD:</i></p> <ol style="list-style-type: none"> <li><i>Section J. and Section D.2.</i></li> <li><i>Section B.</i></li> <li><i>Section H.3, H.4 and I.2.</i></li> </ol>				
<b>Project participant response</b>				<b>Date:</b> 30/10/2019
<ol style="list-style-type: none"> <li>Section J. and Section D.2 has been corrected</li> <li>Section B has been corrected. The references (examples) has been updated as the examples that was in the registered PoA DD was to CPAs that has been removed from the PoA since the registration of the PoA DD:</li> <li>Section H.3 has been updated. Section H.4 has been updated, and special care has been taken to "Not provide information that is not essential to understanding the purpose of the generic CPA and how it reduced GHG emission". Based on this guideline in the form (see guidelines form under H.4, sub point 4) the information that is not needed to understand how the ER is achieved shall not be elaborated at length in the PoA DD. I.2 has been updated to include conditions related to AMS-III.AV.</li> </ol>				
<b>Documentation provided by project participant</b>				
PoA DD Version 25				

<b>DOE assessment</b>	<b>Date:</b> 15/11/2019
<p>The DOE, through review of PoA-DD version 25 provided in response to this CAR, arrives to the following conclusions:</p> <ol style="list-style-type: none"> <li><i>Section J. and Section D.2.</i>  <p>The <i>Section D.2.</i> is in compliance with the template's instructions, hence accepted.</p> <p>The <i>Section J.</i> is in compliance with the template's instructions, hence accepted.</p> </li> <li><i>Section B.</i>  <p>The CME is still requested to comply with the given instructions for completion of the form CDM-PoA-DD-FORM version 09.0, as the information included in the revised version 25 of the PoA-DD has not observed all the items prescribed by the PoA-DD Form instructions for the description of the management system.</p> </li> <li><i>Section H.3, H.4 and I.2.</i>  <p>The <i>Section H.3.</i> now includes the specification of the small-scale project type applicable to the generic CPA, thus in compliance with the template's instructions.</p> <p>For the <i>Section H.4.</i> the CME is requested to provide information as per the CDM-PoA-DD-FORM version 09.0 template's instructions.</p> <p>For the <i>Section I.2.</i>, the CME is still requested to comply with the given instructions for completion of the form CDM-PoA-DD-FORM version 09.0, as the information included in the revised version 25 of the PoA-DD has not observed all the items prescribed by the PoA-DD Form instructions for the definition and demonstration of the type of small scale CPA.</p> </li> </ol> <p>Moreover:</p> <ol style="list-style-type: none"> <li>The CME is requested to provide in <i>Section H.2.</i> of the PoA-DD a reference number for the Generic CPA, as specified by the CDM-PoA-DD-FORM version 09.0 template's instructions.</li> <li>The CME is requested to provide in <i>Section I.1.</i> of the PoA-DD the reference to the methodological tools to which the methodology(ies) refer, as specified by the CDM-PoA-DD-FORM version 09.0 template's instructions.</li> <li>The CME is requested to review the <i>Section I.7.2.</i> and <i>Section I.7.3.</i> in order to provide the requested information as indicated by the CDM-PoA-DD-FORM version 09.0 template's instructions.</li> </ol> <p>Hence, the CAR remains open.</p>	
<b>Project participant response</b>	<b>Date:</b> 28/11/2019
<ol style="list-style-type: none"> <li>Accepted</li> <li>Section B of the PoA DD has been updated in accordance with the requirement in the CDM-PoA-DD-FORM version 09.0</li> <li>Section H.4 has been updated both with regards to service level and expected lifetime of deployed solutions/technologies. It is noted that the guidelines specify "Do not provide information that is not essential to understanding the purpose of the generic CPA and how it reduces GHG emissions". The information related to deployed technologies is to be provided in CPA prior or after the registration of a CPA DD. Section I.2 has been updated.</li> <li>Section H.2 has been updated so that the Generic CPA has a number.</li> <li>Section I.1 has been updated with the tools referred to in the Methodology and the PoA DD.</li> <li>The sampling plan has been included in section I.7.2 in accordance with the guidelines for filling out the form. Section I.7.3 has also been updated</li> </ol>	
<b>Documentation provided by project participant</b>	
PoA DD version 26	
<b>DOE assessment</b>	<b>Date:</b> 12/01/2020

The DOE after the review of the revised PoA-DD concludes that:	
<ol style="list-style-type: none"> <li>1. Section B has been updated accordingly and it is in line with the template's instructions. Thus is accepted.</li> <li>2. Section H.4. provides now enough information to comply with the template's minimum requirements, stating that the accurate and appropriate information for the deployed technologies will be described at CPA level. This is found acceptable.</li> <li>3. Section I.2. is still not in compliance with the required information as per the template's instructions. Corrective action is sought for the same.</li> <li>4. Section H.2. provides a ref. number, hence accepted.</li> <li>5. Section I.1. provides the references to the applicable regulatory documents used in the PoA, hence accepted.</li> <li>6. Sections provide adequate information as per the template's instructions, hence accepted.</li> </ol>	
Hence, the CAR remains open.	
<b>Project participant response</b>	<b>Date:</b> 03/07/2020
<i>The section I2 has now been completed in line with the CDM-PoA-DD-FORM_v9.0 form template requirements</i>	
<b>Documentation provided by project participant</b>	
<i>PoA-DD version 28.0</i>	
<b>DOE assessment</b>	<b>Date:</b> 28/07/2020
The remaining corrective action has been applied and found appropriate.	
Hence, the CAR is closed.	

<b>CAR ID</b>	07	<b>Section no.</b>	D.2.1.	<b>Date:</b> 26/06/2020
<b>Description of CAR</b>				
<i>The CME has sent a revised PoA-DD by applying the latest valid versions of the methodologies AMS I.E. and AMS-III.AV.</i>				
<i>The CME is requested to apply consistently the latest valid version of the methodologies along the PoA-DD.</i>				
<b>Project participant response</b>				<b>Date:</b> 03/07/2020
The CME has made the required and necessary revisions to the PoA-DD to align with the latest versions of the methodology and to change for any significant changes as a result of the revised methodology versions.				
<b>Documentation provided by project participant</b>				
<i>PoA-DD version 28.0</i>				
<b>DOE assessment</b>				<b>Date:</b> 28/07/2020
The corrective action has been applied consistently and so is found acceptable.				
Hence, the CAR is closed.				

<b>CAR ID</b>	08	<b>Section no.</b>	D.2.5.	<b>Date:</b> 28/07/2020
<b>Description of CAR</b>				



<p><i>It is noted that in the submitted version 28 of the PoA-DD, the CME has applied a full revision and re-organization of the Eligibility Criteria.</i></p> <p><i>The DOE requests corrective action for the following detected issues:</i></p> <ol style="list-style-type: none"> <li><i>EC no.5 is inconsistent with EC no.12.</i></li> <li><i>EC no.5 does not provide debundling criteria for Type II measures.</i></li> </ol> <p><i>The DOE also noted that the CME is applying only one Generic CPA in accordance with PS for PoAs Para 79, however, the CME does not comply with such paragraph for the eligibility criteria conditions as in it stated.</i></p>	
<b>Project participant response</b>	<b>Date:</b> 01/09/2020
<ol style="list-style-type: none"> <li><i>The EC 5 is now consistent with EC 12 with regards to rated capacities and energy savings for both methodologies</i></li> <li><i>Debundling criteria for the type II measure is now included in EC 5 for AMS-III.AV</i></li> <li><i>All applicability conditions of both methodologies, Table 1 of the General guidelines for SSC CDM methodologies_v23.0, and paragraph 124 of the CDM project standard for programmes of Activities_v2.0 have been incorporated into the revised and respective eligibility criteria.</i></li> </ol>	
<b>Documentation provided by project participant</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 01/09/2020
The revised PoA-DD addresses the inconsistencies described above for this finding.	
<b>Hence, the CAR is closed.</b>	

<b>CAR ID</b>	09	<b>Section no.</b>	-	<b>Date:</b> 04/11/2020
<b>Description of CAR</b>				
<i>The CME is requested to address the issues detected in the UNFCCC Review notified as incompleteness.</i>				
<b>Project participant response</b>				<b>Date:</b> 25/01/2021
<i>Revised documentation along with responses to the CDM request are provided to DOE.</i>				
<b>Documentation provided by project participant</b>				
<i>Revised PoA-DD and incompleteness responses documents</i>				
<b>DOE assessment</b>				<b>Date:</b> 13/02/2021
The revised PoA-DD addresses the inconsistencies described above for this finding.				
<b>Hence, the CAR is closed.</b>				

Table 3. FAR from this validation

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

## Appendix 5. Assessment of applicability conditions of the applied methodology(ies)

While details and explanations about how the applicability criteria/requirements of the regulatory documents are appropriately and sufficiently included in the Generic CPA in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021, related assessment details are summarized in the table below.

Regarding the applied methodologies<sup>/05//06/</sup>, as per the CDM Project Standard for PoA (version 02.0), paragraphs 284(a) and 284(b) in the context of the renewal of PoA period for a previously registered CDM PoA, the PoA-DD valid for the new 2<sup>nd</sup> 7-year period should be completed by applying the latest version for the CDM baseline and monitoring methodology which was previously applied or, if applicable, the latest version for the CDM baseline and monitoring methodology of which the previously applied CDM methodology was replaced by and/or consolidated into.

The PoA was previously registered by applying the CDM baseline and monitoring methodology AMS-I.E. (version 04). While AMS-I.E. (version 10.1) is the latest valid version of the baseline and monitoring methodology, it is thus the one to be applied in the context of the renewal of PoA period for the registered CDM PoA.

As explained above in Section D.2.1. because of the removal of the SDW solutions from the AMS-I.E. (since version 08.0), the methodology AMS-III.AV. has been included in the PoA.

Applicability criteria of AMS-I.E. (version 10.1)	Assessment by the validation team
1. The methodology is applicable for technologies displacing use of non-renewable biomass by renewable energy	The CPA will deploy energy efficient stoves that use a renewable fuel (bio-ethanol) to reduce the use on non-renewable woody biomass in households and SMEs. Hence, found acceptable by the DOE.
2. Project participants or coordinating and managing entities shall describe in the PDD/PoA-DD how the double counting of emission reductions has been addressed (e.g. between end users, distributors and producers of stoves)	Double counting is avoided via unique identification of project participating households and avoidance of duplication of records, as well as none participation in other schemes. Hence, found acceptable by the DOE.
3. For project activities introducing bio-ethanol cookstoves, project participants or coordinating and managing entities shall demonstrate that the bioethanol cookstoves are designed, constructed and operated to the requirements (e.g. with regard to safety) of a relevant national or local standard or comparable literature. Latest guidelines issued by a relevant national authority or an international organisation may also be used	This applicability condition is ensured by each CPA via eligibility criteria for the inclusion and renewal of CPAs introducing the ethanol stoves. Hence, found acceptable by the DOE.
4. The CDM-PDD or 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)	Double counting is avoided via unique identification of deployed technologies and avoidance of duplication of records, as well as none participation in other schemes. Hence, found acceptable by the DOE.
5. The CDM-PDD or CDM-PoA-DD/CPA-DD shall also explain how the proposed	Double counting is addressed as explained above and through the eligibility criteria for the inclusion

procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others also claim credit for emission reductions from the project devices	and renewal of CPAs introducing the ethanol stoves. Hence, found acceptable by the DOE.
6. For validation and verification of CDM projects and programme of activities by a designated operational entity (DOE) using this methodology, application of sectoral scope 01 is mandatory and sectoral scopes 13 and 15 are conditional	Sectoral Scope 01 has been applied and described in the generic CPA-DD. The DOE is accredited for the purpose of validation for the Sectoral Scope 01 applicable to this PoA.

Applicability criteria of AMS-III.AV. (version 08.0)	Assessment by the validation team
1. Prior to the implementation of the project activity, a public distribution network supplying SDW to the project boundary does not exist, or a public distribution network exists, but is not supplying SDW.	CPAs can only be implemented in areas where there is no public distribution of safe drinking water. The same shall be demonstrated at CPA level through the eligibility criteria for the inclusion and renewal of CPAs introducing the SDW solutions. Hence, found acceptable by the DOE.
2. It shall be demonstrated based on laboratory testing or official notifications (for example notifications from the national authority on health) that the application of the project technology/equipment achieves compliance either with: (i) the Comprehensive Protection performance target as per "Evaluating household water treatment options: Health based targets and microbiological performance specifications" (WHO, 2011) and "International Scheme to Evaluate Household Water Treatment Technologies" (WHO, 2014); or (ii) an applicable national standard or guideline. Applicable national standard should be based on laboratory efficacy testing that, at a minimum, includes quantitative microbial measures of pre- and post-treatment challenge waters <sup>6</sup> that are representative of potential drinking water sources, and that includes measured reductions based on at least one pathogen class (bacteria, viruses, protozoa)	All distributed water quality shall be based on laboratory testing from an accredited entity or authority and shall meet the quality standards specified in this applicability condition. The same shall be demonstrated at CPA level through the eligibility criteria for the inclusion and renewal of CPAs introducing the SDW solutions. Hence, found acceptable by the DOE.
3. In cases where the life span of the water treatment technologies is shorter than the crediting period of the project activity, there shall be documented measures in place to ensure that end users have access to replacement purification systems of comparable quality	The same shall be demonstrated at CPA level through the eligibility criteria for the inclusion and renewal of CPAs introducing the SDW solutions. Hence, found acceptable by the DOE.
4. It should be demonstrated that the project appliances use technologies that meet the technology standards as per paragraph 4(b), and that they deliver microbiologically safe drinking water	The same shall be demonstrated at CPA level through the eligibility criteria for the inclusion and renewal of CPAs introducing the SDW solutions. Hence, found acceptable by the DOE.

Applicability criteria of Tool 30 Calculation of the fraction of non-renewable biomass	Assessment by the validation team
This tool may be used by:	Will be one of the options available for project proponents at CPA level as prescribed in this PoA-DD, hence found acceptable.
(a) DNAs to submit region/country-specific default fNRB values, following the procedures for	

development, revision, clarification and update of standardized baselines (SB procedures); or	
(b) project proponents to calculate project or PoA-specific fNRB values.	
For project or PoA specific fNRB values, project proponents shall assess the area where biomass is sourced and justify the selection of the area in CDM project design documents.	To be demonstrated at CPA-level, which is acceptable.

## Appendix 6. Assessment of eligibility criteria for inclusion of CPAs

### For AMS-I.E.:

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	DOE's opinion
1	Geographical boundary	All distributed units/systems in each CPA are located within the geographical boundaries of the PoA	<ul style="list-style-type: none"> <li>• GPS Coordinates</li> <li>• Maps or address</li> </ul>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

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2	Start date	CPA start date shall not before start date of PoA [30/11/2012]	<p>The start date of the CPA is [<i>specify the date</i>], the date at which the real action started:</p> <ul style="list-style-type: none"> <li>• It is the date at which the order for the first project unit/system in the CPA is placed</li> <li>• It is the date at which the first project unit/system in the CPA is installed</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
3	Life time (Crediting Period)	CPA crediting period shall be within the life time of PoA [30/09/2040]	<p>CPA start date is [<i>specify the date</i>], with</p> <ul style="list-style-type: none"> <li>• Renewable crediting period [<i>specify the period</i>]</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

4	No diversion of ODA	For all CPAs, funding from Annex I Parties, if any, does not result in a diversion of official development assistance (ODA)	The CPA-DD shall, in case of public funding (or an Annex 1 party), review the structure of the public funding and confirm that there is no diversion of Official Development Assistance.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
5	De-bundling	<p>The CPA is exempted from performing the de-bundling check since each individual sub-system and each participating household has thermal energy savings of less than 1% of the SSC threshold and will remain within this threshold throughout the crediting period.</p> <p>Please note that not all equipment and solutions may have been deployed at the CPA inclusion stage but the 1% threshold can however also be checked during verification, and in case of any participating household will be found not in line with the De-bundling requirements, those households will not be counted for in the emission reduction calculations.</p>	The maximum thermal output of any equipment included in the program is defined as 10 kW in accordance with the eligibility criteria. As the SSC threshold is 45 MW, the threshold for exemption from performing a de-bundling check will be 450 kW. The threshold for exemption from performing the de-bundling check will not be reached, and De-Bundling check is therefore not required.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

6	Double Counting	<p>A unique numbering system for each project participating household within the CPA. The unique numbering will consist of a country code, a CPA number within the country and a unique ID number for each project participating household in the CPA. A contract with all the participating households will confirm that the households are not part of any other system that generates carbon credits. The contract can be a written contract signed by individually households, or it can be a contract submitted through the representative from the LPIP through a smart phone application, subject to the households approving all the information filled out by the LPIP.</p> <p>The Reporting and Data Recording Department shall implement a system where it will be automatically registered if two project participating households has:</p> <ol style="list-style-type: none"> <li>1. The same contact phone number, or,</li> <li>2. The same ID number</li> </ol>	<ul style="list-style-type: none"> <li>• End user details (i.e. name, address)</li> <li>• Unique ID of system/unit recorded in a database</li> </ul> <p><b>Documentation:</b></p> <p>End user agreement template</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>(02/)</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>(15/)</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
7	Local stakeholder consultations and environmental impact	<p>Stakeholder consultation and environmental impact assessment will be done for each CPA, if required by the host country.</p> <p>For the first CPA in each Country, the Stakeholder consultation and the Environmental Impact Assessment might be done on the National level as an alternative to the CPA specific Stakeholder Consultation and the CPA specific Environmental Assessment. If so, the stakeholder consultation must include stakeholders that are represented in the CPA area and or are familiar with the conditions in the CPA area. If a national level Environmental Assessment is done for the first CPA in the country, the conditions in the CPA area should be representative for the country.</p>	<p><b>Documentation:</b></p> <ol style="list-style-type: none"> <li>1. Stakeholder consultation report</li> <li>2. Environmental Assessment report</li> </ol>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>(02/)</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>(15/)</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>



8	Target group and distribution mechanism	<p>The CPA specifies the target group of the project unit/system and distribution mechanisms</p> <p>The solutions are provided to domestic households and small businesses only.</p>	<ul style="list-style-type: none"> <li>CPA specifies the distribution mechanism, e.g. direct installation</li> <li>CPA specifies the target group, i.e., households or SME.</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
9	Sampling	<p>Sampling design and calculation shall meet the requirements of the applied methodology, and the sampling standard</p> <p>Sampling will be done for;</p> <ol style="list-style-type: none"> <li>The baseline survey</li> <li>and</li> <li>To determine the emission reduction during the monitoring process.</li> </ol> <p>For both of these processes the project will comply with the requirement of a 90% confidence interval and a 10% margin of error.</p> <p>In case it the option for doing verification for a group of CPAs, then the confidence level of 95/10 shall be achieved.</p> <p>The emission reduction will be calculated based on ex-post survey.</p> <p>The baseline survey shall be done on a sample size of at least 68 households.</p>	<ul style="list-style-type: none"> <li>Parameter [specify the parameter] is determined through sampling at [PoA or CPA] level:</li> <li>[specify sampling method, e.g. simple random sampling] sampling is designed</li> <li>Sampling size is [number], which gives a result of [specify the confidence/precision]</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

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10	SSC threshold	The SSC threshold shall be met. Equivalent to maximum [number] project unit/system units that can be covered under one CPA. The small-scale threshold is not exceeded	CPA [specify title or reference number] distributes [number] project units/systems	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
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11	Additionality	<p>The technology (Ethanol stoves) is automatically additional in accordance with option 1, paragraph 17 of the methodology.</p> <p>It shall be demonstrated that the penetration of renewable energy based thermal energy technologies (Ethanol stoves) is equal to or less than 5 per cent of the technologies/measures providing similar services in the region (country) in order to be considered as automatically additional.</p>	<p>The penetration shall be determined using one of the following options.</p> <p>(a) Official statistics or reports, relevant industry association reports or peer-reviewed literature;</p> <p>(b) Results of a sampling survey conducted by project participants or a third party as per the latest version of "Standard: Sampling and surveys for CDM project activities and programme of activities"; covering technologies/measures providing similar services as the project technology/measure.</p> <p><b>Documentation</b></p> <ul style="list-style-type: none"> <li>To determine the penetration using the above paragraph, the most recent data available at the time of submission of the CDM-CPA-DD for validation/inclusion or renewal shall be used, and the data vintage used shall not include data older than three years prior to: (a) the start date of the CDM project activity; or (b) the start of validation/inclusion, whichever is earlier.</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
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12	Technology	<p>The CPA consists of solutions to reduce emission from burning non-renewable woody biomass for cooking. The solutions include:</p> <ul style="list-style-type: none"> <li>Ethanol stove that shall have a thermal output of no more than 10 kW and a thermal efficiency of no less than 50%.</li> <li>For project activities introducing bio-ethanol cookstoves, CPA implementers shall demonstrate that the cookstoves are designed, constructed and operated to the requirements (e.g. with regard to safety) of a relevant national, local or international standard.</li> </ul>	<p>The thermal output and thermal efficiency of the ethanol stoves used in the CPA shall be determined by product specification provided by the equipment (stove) supplier.</p> <p>In cases where such documentation is unavailable the thermal output and thermal efficiency shall be determined by a qualified laboratory.</p> <p><b>Document:</b> Product Data sheet or product specification provided by the product supplier or a certified laboratory product test.</p> <p>This will be provided during monitoring and such documentation shall then be provided for all the equipment used in each CPA.</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
13	Use of NRB	<p>The CPA demonstrates that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics</p>	<p>The use of NRB is demonstrated by:</p> <ul style="list-style-type: none"> <li>Survey report, or</li> <li>Published literature, or</li> <li>Official reports and/or statistics, or</li> <li>Other means [...]</li> <li>It is demonstrated at: CPA level.</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

14	Approval of CPA by CME	CME approved each CPA to be included into the registered PoA	<b>Documentations:</b> Statement of CME giving approval for the CPA to be included into its registered PoA.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
15	Legal requirements	CME has commissioned studies in each country included in the program to determine if there are any legal or policy requirements for households to use the equipment promoted by the PoA or that there are any law or policy against using such solutions.	<b>Documentation:</b> Letter from 3rd party for each country included in the PoA.  The study shall be no more than 2 years old at the time of the request for CPA inclusion. A copy of such documentation shall be enclosed as part of the request for CPA inclusion.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

16	Confirm that the project is not generating carbon credits from any other program or projects.	<p>The baseline survey will confirm that the solutions to be employed by the program of activities in the particular CPA have not been employed prior to the project registration.</p> <p>The end user contracts will confirm that the end user solutions provided as part of the CPA is not part of any other program that might generate carbon credits</p>	<p><b>Documentations:</b></p> <p>Baseline survey</p> <p>End user contract</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
17	Exclusivity of boundary	<p>No component of a project activity of one CPA shall be part of any other CPA. Every project participating household is exclusive to one CPA<sup>7</sup>.</p> <p>The proposed CPA will not be a deregistered CPA or project activity.</p>	<p><b>Documentations:</b></p> <p>Confirmation from CME that no component of the CPA is part of any other CPA under the PoA. And that the CPA is not a deregistered CPA or project activity.</p> <p>"Unique ID system for each household shall be defined at the time of CPA inclusion in order to avoid any double counting. This unique id shall be verified at the time of CPA inclusion. This unique id(code) shall be archived in CME database."</p> <p>End user agreement.</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

<sup>7</sup> Every project component, that is every project participating household, shall be exclusive to one CPA. When the small scale threshold is reached, a new CPA might be registered which might include the same geographical area as a previously registered CPA, but the project participant shall ensure that each project participating household is only part of one CPA so as to avoid double counting.

18	Validation of the baseline scenario	<p>The baseline s defined by the applied methodology and shall be valid at the time of inclusion or renewal CPA crediting period.</p> <p>In the case of renewal of crediting period, CPAs shall validate the baseline values following the guidance of the methodological TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period.</p> <p>The project shall be in compliance with the current baseline with relevant mandatory national and/or sectoral policies. Including confirmation, the validity of the IPCC values and all other values used for calculation of ER.</p>	Confirmed from CME that the CPA is in compliance with the current baseline scenario and with relevant mandatory national and or sectorial policies. Including the confirmation of the values used in the CPA-DD including the IPCC values and other values used to calculate emission reductions.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
19	CER Ownership	<p>The CERs shall be the sole ownership of the CME, and the CME shall provide part of the income generated from the CERs to pay for subsidies of the equipment to be deployed in the CPA.</p> <p>Please note that loan agreements might be made so that the equipment will be financed by loans to be paid for with the income generated from the sales of the CERs.</p>	<p><b>Documentations:</b></p> <p>The contractual agreement between CME and the key partners or LPIP and distributors shall specify that part of the income from the carbon credits shall be used to subsidize the equipment deployed in the CPA.</p> <p>The end user agreement shall state that the carbon credits generated belong to CME.</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

**For AMS-III.AV.:**

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	DOE's opinion
1	Geographical boundary	All distributed units/systems in each CPA are located within the geographical boundaries of the PoA	<ul style="list-style-type: none"> <li>GPS Coordinates</li> <li>Maps or address</li> </ul>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
2	Start date	CPA start date shall not before start date of PoA [30/11/2012]	<p>The start date of the CPA is [<i>specify the date</i>], the date at which the real action started:</p> <ul style="list-style-type: none"> <li>It is the date at which the order for the first project unit/system in the CPA is placed</li> <li>It is the date at which the first project unit/system in the CPA is installed</li> </ul>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.



3	Life time (Crediting Period)	CPA crediting period shall be within the life time of PoA [30/09/2040]	CPA start date is [specify the date], with <ul style="list-style-type: none"> <li>Renewable crediting period [specify the period]</li> </ul>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
4	No diversion of ODA	For all CPAs, funding from Annex I Parties, if any, does not result in a diversion of official development assistance (ODA)	The CPA-DD shall, in case of public funding (or an Annex 1 party), review the structure of the public funding and confirm that there is no diversion of Official Development Assistance.	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

5	De-bundling	<p>The CPA is exempted from performing the de-bundling check since each individual sub-system and each participating household has thermal energy savings of less than 1% of the SSC threshold and will remain within this threshold throughout the crediting period.</p> <p>Please note that not all equipment and solutions may have been deployed at the CPA inclusion stage but the 1% threshold can however also be checked during verification, and in case of any participating household will be found not in line with the De-bundling requirements, those households will not be counted for in the emission reduction calculations.</p>	<p>The energy savings from any equipment included in the project shall be less than 1% of a maximum energy saving of 60 GWh per year (or an appropriate equivalent) in any year of the crediting period. In this context, for project activities that improve thermal energy efficiency, the maximum energy saving of 60 GWh(e) per year is equivalent to 180 GWh(th) per year saving.</p> <p><b>Documentation</b> It is demonstrated through Installed capacity of each project unit is [value], less than 1 per cent of SSC threshold</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
6	Double Counting	<p>A unique numbering system for each project participating household within the CPA. The unique numbering will consist of a country code, a CPA number within the country and a unique ID number for each project participating household in the CPA. A contract with all the participating households will confirm that the households are not part of any other system that generates carbon credits. The contract can be a written contract signed by individually households, or it can be a contract submitted through the representative from the LPIP through a smart phone application, subject to the households approving all the information filled out by the LPIP.</p> <p>The Reporting and Data Recording Department shall implement a system where it will be automatically registered if two project participating households has:</p> <ol style="list-style-type: none"> <li>3. The same contact phone number,</li> <li>or,</li> <li>4. The same ID number</li> </ol>	<ul style="list-style-type: none"> <li>• End user details (i.e. name, address)</li> <li>• Serial numbers of system/unit recorded in a database</li> </ul> <p><b>Documentation:</b></p> <p>End user agreement template</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

7	Local stakeholder consultations and environmental impact	<p>Stakeholder consultation and environmental impact assessment will be done for each CPA, if required by the host country.</p> <p>For the first CPA in each Country, the Stakeholder consultation and the Environmental Impact Assessment might be done on the National level as an alternative to the CPA specific Stakeholder Consultation and the CPA specific Environmental Assessment. If so, the stakeholder consultation must include stakeholders that are represented in the CPA area and or are familiar with the conditions in the CPA area. If a national level Environmental Assessment is done for the first CPA in the country, the conditions in the CPA area should be representative for the country.</p>	<p><b>Documentation:</b></p> <p>3. Stakeholder consultation report</p> <p>4. Environmental Assessment report</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
8	Target group and distribution mechanism	<p>The CPA specifies the target group of the project unit/system and distribution mechanisms</p> <p>The solutions are provided to domestic households and small businesses where a public distribution does not exist in the CPA boundary, or a public distribution network exists, but is not supplying SDW.</p>	<ul style="list-style-type: none"> <li>• CPA specifies the distribution mechanism, e.g. direct installation</li> <li>• CPA specifies the target group, i.e., households or SME.</li> <li>• Confirmed information via survey that a public distribution network does not exist or a public distribution network is not supplying SDW</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

9	Sampling	<p>Sampling design and calculation shall meet the requirements of the applied methodology, and the sampling standard</p> <p>Sampling will be done for;</p> <p>3. The baseline surveys</p> <p>and</p> <p>4. To determine the emission reduction during the monitoring process.</p> <p>For both of these processes the project will comply with the requirement of a 90% confidence interval and a 10% margin of error.</p> <p>In case it the option for doing verification for a group of CPAs, then the confidence level of 95/10 shall be achieved.</p> <p>The emission reduction will be calculated based on ex-post survey.</p> <p>The baseline survey shall be done on a sample size of at least 68 households.</p>	<ul style="list-style-type: none"> <li>Parameter [specify the parameter] is determined through sampling at [PoA or CPA] level:</li> <li>[specify sampling method, e.g. simple random sampling] sampling is designed</li> <li>Sampling size is [number], which gives a result of [specify the confidence/precision]</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
10	SSC threshold	<p>The SSC threshold shall be met. Equivalent to maximum [number] project unit/system units that can be covered under one CPA. The small-scale threshold is not exceeded</p>	<p>CPA [specify title or reference number] distributes [number] project units/systems</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

11	Additionality	<p>Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to "Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions".</p> <p>Reference to Tool 21, paragraph 10 (c).</p>	<p>Supporting evidence. The projects is only applicable for areas where water supply system is not in place, or a public distribution network exists, but is not supplying SDW.</p> <p>In such areas, where water supply is not in place, the alternatives is always solutions which leads to higher emissions.</p> <p><b>Documentation</b></p> <ul style="list-style-type: none"> <li>• Baseline survey or,</li> <li>• Published data indicating the absence of a Public Distribution Network (PDN) to supply SDW or presence of a PBN but not supplying SDW or,</li> <li>• Signed confirmation by government officials or</li> <li>• Survey and Interviews with locals.</li> <li>•</li> </ul>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
12	Technology	<p>The CPA consists of solutions to reduce emission from burning non-renewable woody biomass for boiling water. The solutions include:</p> <ul style="list-style-type: none"> <li>• The community water purification systems shall be soil filtration schemes (boreholes, wells) that may include container disinfection such as chlorination. The system shall be manually operated (handpump). Rehabilitation and/or construction of the wells shall provide water comply with relevant national and/or international standards for drinking water and measures are taken to ensure that water and well are not contaminated.</li> <li>• The Household water purification systems shall provide purified water that meet applicable national microbiological water quality standards/guidelines or WHO's interim performance target on household water treatment.</li> <li>• The product lifespan shall be specified in the water purification technology and if shorter than the crediting period, there shall be documented measures in place to ensure that end users have access to replacement purification systems of comparable quality.</li> </ul>	<p><b>Document:</b> Product Data sheet or product specification provided by the product supplier or a certified laboratory product test.</p> <p>This will be provided during CPA validation and such documentation shall then be provided for all the equipment used in each CPA.</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

13	Use of NRB	The CPA demonstrates that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics	<p>The use of NRB is demonstrated by:</p> <ul style="list-style-type: none"> <li>• Survey report</li> <li>• Published literature</li> <li>• Official reports and/or statistics</li> <li>• Other means [...]</li> <li>• It is demonstrated at: CPA level</li> </ul>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
14	Approval of CPA by CME	CME approved each CPA to be included into the registered PoA	<p><b>Documentations:</b></p> <p>Statement of CME giving approval for the CPA to be included into its registered PoA.</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

15	Legal requirements	CME has commissioned studies in each country included in the program to determine if there are any legal or policy requirements for households to use the equipment promoted by the PoA or that there are any law or policy against using such solutions.	<p><b>Documentation:</b> Letter from 3rd party for each country included in the PoA.</p> <p>The study shall be no more than 2 years old at the time of the request for CPA inclusion. A copy of such documentation shall be enclosed as part of the request for CPA inclusion.</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.
16	Confirm that the project is not generating carbon credits from any other program or projects.	<p>The baseline survey will confirm that the solutions to be employed by the program of activities in the particular CPA have not been employed prior to the project registration.</p> <p>The end user contracts will confirm that the end user solutions provided as part of the CPA is not part of any other program that might generate carbon credits</p>	<p><b>Documentations:</b> Baseline survey</p> <p>End user contract</p>	The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs <sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD <sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.

17	Exclusivity of boundary	<p>No component of a project activity of one CPA shall be part of any other CPA. Every project participating household is exclusive to one CPA<sup>8</sup>.</p> <p>The proposed CPA will not be a deregistered CPA or a CDM project activity.</p>	<p><b>Documentations:</b> Confirmation from CME that no component of the CPA is part of any other CPA under the PoA. And that the CPA is not a deregistered CPA or project activity.</p> <p>"Unique ID system for each household shall be defined at the time of CPA inclusion in order to avoid any double counting. This unique id shall be verified at the time of CPA inclusion. This unique id(code) shall be archived in CME database."</p> <p>End user agreement.</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
18	Validation of the baseline scenario	<p>The baseline is defined by the applied methodology and shall be valid at the time of inclusion or renewal CPA crediting period.</p> <p>In the case of renewal of crediting period, CPAs shall validate the baseline values following the guidance of the methodological TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period.</p> <p>The project shall be in compliance with the current baseline with relevant mandatory national and/or sectoral policies. Including confirmation, the validity of the IPCC values and all other values used for calculation of ER.</p>	<p>Confirmed from CME that the CPA is in compliance with the current baseline scenario and with relevant mandatory national and or sectorial policies. Including the confirmation of the values used in the CPA-DD including the IPCC values and other values used to calculate emission reductions.</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>

<sup>8</sup> Every project component, that is every project participating household, shall be exclusive to one CPA. When the small scale threshold is reached, a new CPA might be registered which might include the same geographical area as a previously registered CPA, but the project participant shall ensure that each project participating household is only part of one CPA so as to avoid double counting.



19	CER Ownership	<p>The CERs shall be the sole ownership of the CME, and the CME shall provide part of the income generated from the CERs to pay for subsidies of the equipment to be deployed in the CPA.</p> <p>Please note that loan agreements might be made so that the equipment will be financed by loans to be paid for with the income generated from the sales of the CERs.</p>	<p><b>Documentations:</b></p> <p>The contractual agreement between CME and the key partners or LPIP and distributors shall specify that part of the income from the carbon credits shall be used to subsidize the equipment deployed in the CPA.</p> <p>The end user agreement shall state that the carbon credits generated belong to CME.</p>	<p>The DOE has checked the eligibility criteria and the supporting evidence considered for the inclusion or renewal of crediting period of a CPA in the PoA for this type of technology, has commented the criteria with the authorized participants during the interviews and found it in compliance with the PS for PoAs<sup>/02/</sup> version 02.0 Paragraph 124, with the description and statements in the revised PoA-DD<sup>/15/</sup> version 29 dated on 25/01/2021 and with the requirement to update it during renewal of PoA period, hence found acceptable.</p>
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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	31 May 2019	Revision to: <ul style="list-style-type: none"><li>• 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);</li><li>• Make editorial improvements.</li></ul>
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