




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

BASIC INFORMATION

Title and UNFCCC reference number of the programme of activities (PoA)	Title: Promoting Efficient Stove Dissemination and Use in West Africa UNFCCC reference number: 9666
Number and duration of the next PoA period	2 nd crediting period Duration: 24/06/2020- 23/06/2027
Version number of the validation report	1.1
Completion date of the validation report	05/08/2021
Version number of PoA-DD to which this report applies	16
Coordinating/managing entity (CME)	Toyola Energy Limited
Host Parties	Burkina Faso Ghana Mali Senegal Togo
Applied methodologies and standardized baselines	AMS-II.G. Version 12, "Energy efficiency measures in thermal application of non-renewable biomass" Standardized baseline: N/A
Mandatory sectoral scopes	03- Energy Demand
Conditional sectoral scopes, if applicable	N/A
Name and UNFCCC reference number of the DOE	Name: KBS Certification Services Pvt. Ltd. UNFCCC reference number: E-0051
Name, position and signature of the approver of the validation report	 Kaushal Goyal Managing Director KBS Certification Services Pvt. Ltd.

SECTION A. Executive summary

>>KBS Certification Services Pvt. Ltd. has been contracted by 'Toyola Energy Limited' to perform a validation of the CDM registered PoA 'Promoting Efficient Stove Dissemination and Use in West Africa' (UNFCCC Ref 9666) for renewal of crediting period.

The scope of the validation is defined as an independent and objective review of the revised Programme of activity design document, the PoA's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the CDM Validation and Verification Standard for Programme of Activities (version 02), Project Cycle Procedure for Programme of Activities (version 02) and Project Standard for Programme of Activities (version 02), Kyoto Protocol requirements and UNFCCC rules.

The report is based on the assessment of the Programme of activity design document, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions. This report summarizes the findings from the validation of the updated PoA-DD of the PoA, performed on the basis of UNFCCC criteria for CDM, as well as criteria given by the CDM VVS PoA, CDM Project cycle procedure for programme of activities and CDM Project Standard for Programme of Activities and included an assessment of: (a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period at the time of requesting renewal of crediting period; (b) The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions from the applicable crediting period. This validation opinion is also to be seen in conjunction with the validation report at the time of requesting registration for the first crediting period. The Validation Opinion is not meant to provide any consultancy towards the CME. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

This PoA will involve dissemination of charcoal and firewood stoves that are more efficient than traditional stoves and as a result, reduce emissions of GHG. The efficient stoves can be portable or stationary; one-pot or multi-pot. Fuel efficient biomass cook stoves are well proven to reduce greenhouse gas emissions, and to provide co-benefits to users and families in the form of relief from high fuel costs, reduced exposure to health-damaging airborne pollutants, faster cooking (resulting in time-savings), and increased cleanliness and convenience.

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

- ☒ The Programme of Activity will be recommended to the CDM Executive Board with a request for renewal of crediting period.
- ☐ The Programme of Activity is not recommended for renewal of crediting period

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader & Technical expert 3.1	IR	Kandari	Sanjay	Central Office	X	-	x	x
2.	Validator	IR	Dey	Deboshmita	Central Office	X	-	x	x

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer, Technical Expert (TA 3.1)	IR	Chaudhari	Tushar	Central Office
2	Manager Technical & Certification	IR	Chaudhari	Tushar	Central Office
3	Authorizer	IR	Goyal	Kaushal	Central Office

SECTION C. Means of validation**C.1. Desk/document review**

>>The report is based on the assessment of the Programme of activity design document version 1 and subsequent versions, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions.

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

C.2. On-site inspection

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

In addition, audit team has conducted calls/interviews (telephonic) with CME on different topics as mentioned under section C.3 of this report.

Based on the calls/interviews, PoA-DD review, as well as the review of UNFCCC procedures and guidelines, KBS Validation team has proceeded to skip the site visit. As per para 184 of CDM validation and verification standard for programmes of activities version 02, Validation team 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;

• By taking follow up actions by conducted interview with CME, to gather information about knowledge of project design, current situation via telephonic call and e-mail communication. Cross-checked evaluation under the scope of all information and references provided in PoA-DD. Details of interviewees, topics covered and additional information presented in the below section “C.3 - Interviews”.
Validation team has also checked the site visit requirements mentioned in the VVS for PoA Version 02 and concluded that no-site visit is required. The justification for the site visit requirements of VVS PoA Version 02 have been mentioned below.

VVS PoA Version 02 Requirements	Validation team Justification
Para 29 (b) (b) Follow-up actions (e.g. on-site inspection and telephone or e-mail interviews), including: (i) Interviews with relevant stakeholders in the host country, such as personnel with knowledge of the PoA design and implementation; (ii) Cross checks between the information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted;	Validation team has done the follow-up actions by: 1. telephonic call and e-mail conversations of CME. 2. Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.
Para 183 It is mandatory for the DOE to conduct an on-site inspection at validation for the proposed CPA if: (a) Its estimated annual average of GHG emission reductions or net anthropogenic GHG removals is more than 100,000 t CO ₂ eq; or (b) There is pre-project information that is relevant to the requirements for inclusion of the CPA and may not be traceable after the inclusion.	The validation team has not considered the site visit as mandatory due to the following reasons which are in line with the VVS PoA Version 02 Requirements. For the PoA to be renewed, this is not applicable as the estimated annual average of GHG emission reductions would be defined at specific CPA level. Also there is no pre-project information that is relevant to the requirements for renewal of the PoA and may not be traceable after the renewal. Hence for the proposed PoA at the stage of RCP, it is not mandatory to conduct the site visit.

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

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Mishra	Prakash Kumar	Representing CME	20/05/2021	<ul style="list-style-type: none"> General description Technologies / measures Methodology applicability Monitoring plan Baseline of the project and its updates etc. 	Sanjay Kandari
2	Ologburo	Suraj	Chairman and MD-Toyola Energy– IM01	21/06/2021 22/07/2021		
3	Dankwa	Richard	Operation Manager			
					stove production, Stove sales,	

					Information flow, data Management, record keeping, Financial Management, staff training, sales database	
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C.4. Sampling approach

>>Not applicable.

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

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Programme of activities			-
Compliance with PoA-DD form	--	--	--
Programme of activities period	CL 02	CAR 06	--
Coordinating/managing entity and the project participants	CL 03	--	--
Post-registration changes	--	--	--
Generic component project activities			
Application and selection of methodologies and standardized baselines	--	CAR 01	--
Validity of original baseline or its update	CL 04		--
Estimated emission reductions or net anthropogenic removals	--	CAR 04	--
Validity of monitoring plan	CL 01	CAR 02, CAR 03, CAR 05	--
Eligibility criteria for inclusion of CPAs	--	CAR 08	--
Others (Related to appendix of PRC)	--	CAR 07	
Total	04	08	00

SECTION D. Validation findings

D.1. Programme of activities

D.1.1. Compliance with PoA-DD form

Means of validation	PoA-DD applies the applicable CDM-PoA-DD-FORM: Programme of activities design document form version 09/09/. KBS verified that the renewal crediting period, information transferred to the later valid version of the PoA-DD form is materially the same as that in the registered PoA-DD/01/.
Findings	No findings raised.
Conclusion	Validation team confirms that final PoA-DD is completed using the valid version of the applicable CDM-PoA-DD-FORM: Programme of activities design document form version 09/09/ in compliance with para 381 of VVS for PoA version 02. All the information has been correctly transferred from registered PoA-DD to the current PoA-DD which is filled in the latest PoA-DD form available in UNFCCC website. Validation team confirms that the transfer of information from the old form to the new form is correct and materially the same as the information in the registered PoA-DD and also in compliance with the latest registered PoA-DD which is further in compliance with para 381 of VVS for PoA version 02.

D.1.2. Programme of activities period

Means of validation	As verified from the PoA-DD/01/, the start date of 2 nd crediting period for this PoA is from 24/06/2020- 23/06/2027 with the length of 7 years
Findings	CL 02, CAR 06 has been raised and successfully closed. Refer to appendix 5 for further details.
Conclusion	The start date of 2 nd crediting period is next date of the end date of 1 st crediting period and hence, it is acceptable.

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

Means of validation	As per submitted PoA-DD/01/, the CME is 'Toyola Energy Limited' which is consistent with latest MoC statement .available at UNFCCC Webpage/05/ which is in compliance with para 384 of VVS for programme of activities 02 /12/. Validation team observed that CME change took place prior to the RCP process therefore the change in CME also validated by the validation team in line with the paragraph 199 of the PCP for PoA, version 02. The Coordinating/Managing Entity
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	<p>(CME) has changed subsequent to the registration of the CDM PoA.</p> <p>The Coordinating and Managing Entity of the PoA has changed subsequent to the registration of PoA. The old CME for the PoA was 'E+ Carbon' and the new CME is 'Toyola Energy Limited'. The change is already updated by the new CME at PoA webpage by submitting the recent letter of authorizations to UNFCCC registry.</p> <p>The operation and management arrangements will remain same as mentioned in the registered PoA-DD. However, the roles and responsibilities of implementation will be managed by the new CME. From the assessment of the revised PoA-DD, the DOE confirms that the revised PoA will be developed and implemented with the same framework.</p> <p>The declaration from 'Toyola Energy Limited' (new CME) has been checked as per which new CME will develop and implement the PoA with the same framework as described in the registered PoA-DD. Further the new CME also confirms that it will be in compliance with the operational and management system as described in the PoA-DD (Section B 'Management System') and Section 7.3 of the CDM project standard for PoAs, version 02.0.</p> <p>The "Change of Coordinating/managing entity for programme of activities" form has also been submitted by the CME and found to be in line with the requirements of the PCP for PoA, version 02.</p> <p>Therefore, the change was accepted by the DOE.</p>
Findings	CL 03 has been raised and successfully closed. Refer to appendix 5 for further details.
Conclusion	Validation team confirm that the name of the CME in the updated PoA-DD /01/ is consistent with the name of the CME in the MoC statement available at UNFCCC Webpage/05/ which is in compliance with para 384 of VVS for programme of activities 02 /12/.

D.1.4. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Corrections	Y	01	24/07/2021
Inclusion of monitoring plan	N	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	Y	01	14/07/2021
Changes to the programme design	Y	01	24/07/2021
Addition of CPA inclusion template	N	NA	NA
Changes specific to afforestation and reforestation activities	N	NA	NA
Change of coordinating/managing entity	Y	01	24/07/2021

D.2. Generic component project activities

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

Means of validation	At the time of PoA registration, the PoA applied the following methodology: <ul style="list-style-type: none">AMS-II.G. "Energy efficiency measures in thermal application of non-renewable biomass", Version 4.0		
	For the renewal of crediting period, the submitted revised PoA-DD /03/ correctly applies the version of the methodology, i.e. version 12 – "AMS-II.G. "Energy efficiency measures in thermal application of non-renewable biomass"/06/. Therefore, the PoA was validated against AMS-II.G. Version 12, "Energy efficiency measures in thermal application of non-renewable biomass"/06/ requirements, as assessed below:		
	No.	Applicability of AMS-II.G Version 12.0	Validation Remarks
	1.	In the case of cookstoves, the methodology is applicable to the introduction of single pot or multi pot portable or in-situ cookstoves with rated efficiency of at least 20 per cent.	The PoA will distribute high efficiency biomass stoves as confirmed from the CME interviews which will have a minimum efficiency of 20%. The previous verification reports of the PoA also reviewed by the assessment team to confirm the actual efficiency of implemented cook stoves and it was concluded that the efficiency was above 20% in all cases. Therefore, the validation team confirms that the criteria is met.
	2.	The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	Each CPA will disseminate a number of stoves whose energy savings will be equivalent to 180 GWh thermal in energy savings or claim ER from only the number of stoves equivalent to that energy saving as confirmed from the CME interviews. Therefore, the validation team confirms that the criteria is met. Further this shall also be confirmed at the time of CPA inclusions.
3.	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).	The cookstoves will be donated or sold either directly to end users or through intermediaries and an identification method (e.g. serial numbering and logo) to avoid double counting will be provided as confirmed from the CME interviews. Therefore, the validation team confirms that the criteria is met.	
4.	Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	CME has demonstrated in the updated PoA DD that Non-renewable biomass has been used in the project region since 31 December 1989 for each host country within the geo boundary	

			of this PoA i.e Togo, Senegal, Burkina Faso, Ghana & Mali. CME has used the FI database for each country and validation team gone through the links/sources submitted by the CME and concluded that the evidences are credible and demonstrates that Non-renewable biomass has been used in the project region since 31 December 1989. Criteria met.
	5.	For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.	This is not applicable for this PoA as biomass will be only sourced from the non renewable sources. Enrb shall also be calculated/determined and demonstrated at the time of CPA inclusion for this PoA. Therefore the criteria is not applicable.
	6.	The CDM-PDD or CDM-PoA-DD/CPA-DD shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	This is already part of eligibility criteria of PoA and validated in further section of this report.
Findings	CAR 01 has been raised and successfully closed. Refer to appendix 5 for further details.		
Conclusion	The PoA fulfills all relevant criteria of the applied methodology AMS-II.G. "Energy efficiency measures in thermal application of non-renewable biomass Version 12.0. Hence, use of the selected methodology is appropriate for this PoA.		

D.2.2. Validity of original baseline or its update

Means of validation	<p>In according to para 382 of VVS for PoA version 02.0, the assessment team reviewed the updated PoA-DD and evaluated whether CME assess and incorporate the impact of new national and/or sectoral policies and circumstances existing at the time of requesting renewal of PoA period on the modalities to estimate baseline GHG emissions for the subsequent crediting period of each corresponding CPA, without reassessing the baseline scenario.</p> <p>Whether 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 assessment team identified whether coordinating/managing entity update such data and parameters in accordance 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.</p> <p>The steps from 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 as per CDM VVS for PoA version 02.0.0 were applied to assess the continued validity of the baseline and/or to update the baseline at the renewal of a crediting period:</p> <p>The stepwise assessment has been conducted below:</p> <p>Step 1: Assess the validity of the current baseline for the next crediting</p>
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period

The CDM Project Standard for PoA, version 2.0 requires assessing the impact of new relevant national and/or sectoral policies and circumstances on the baseline. The validity of the current baseline is assessed in the following sub-steps:

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

The boundary of the PoA covers West African countries and the PoA currently has CPAs in Five west African countries.

There are no mandatory laws requiring households to switch to use of efficient stoves and the household makes the switch voluntarily based on the information they receive from the promotional and marketing initiatives regarding the benefits of the stove. The project therefore it's being implemented as a voluntary action.

CME has demonstrated the same in section I.5 of the updated PoA DD and validation team also validated the same below:

In accordance with para 287 & 288 of CDM PS for PoAs, version 2 baseline scenarios are reassessed below and found there is no change in baseline scenarios in all five countries included in this PoA.

Togo:

Togo's national energy scenario¹ mentions that only 6.7% population has access to clean fuels and technologies for cooking (% of population) till 2016. The studies available on the link also reveals that over 90% of Togolese urban households do not have access to clean cooking. The supply of butane gas channels are not sufficiently decentralized and the gas price and the purchase cost of user equipment significantly limit the access of the majority of the population to modern cooking fuel. Therefore, it is concluded that the baseline scenario remained unchanged during the renew of crediting period of this programme.

Based on the local and sectoral expertise and in conjunction with the review of evidences furnished by CME, validation team concludes that there is no change in baseline scenario at the time of RCP in particular to the national/sectoral policies.

Ghana:

Ghana's national energy scenario² mentions that only 21.7% population has access to clean fuels and technologies for cooking (% of population) till 2016. Report available on the link 'Several programmes have been undertaken over the years to create awareness on the availability of improved cook stoves, and to facilitate the distribution of modern cooking appliances and fuels with positive health implications. A number of initiatives have also been undertaken under the National LPG Promotion Programme to encourage the use of LPG for cooking' however these programmes are voluntary and doesn't mandate the households to use ICS for cooking. Hence, though a government objective has been defined, it is not guaranteed whether this objective will be achieved in reality and if so, to what extent. Therefore, it is concluded that baseline scenario in Ghana is also unchanged at the time of RCP.

Based on the local and sectoral expertise and in conjunction with the review of evidences furnished by CME, validation team concludes that there is no change in baseline scenario at the time of RCP in particular to the national/sectoral

¹ <https://www.se4all-africa.org/seforall-in-africa/country-data/togo/>

² <https://www.se4all-africa.org/seforall-in-africa/country-data/ghana/>

policies.

Mali:

Mali's national energy scenario³ mentions that only 1% population has Access to clean fuels and technologies for cooking (% of population) till 2016. The link also reveals that the country set a 87% access target to be reached by 2030 for electricity (110% in urban areas, 81% in rural areas) and 100% for clean cooking solution, while further improving the share of renewable energy sources in the electricity mix to 37%. Energy efficiency goal is to achieve a primary energy intensity of 0,43 (ktoe / GDP) by 2030. Hence, though a government objective has been defined, it is not guaranteed whether this objective will be achieved in reality and if so, to what extent. Therefore, it is concluded that baseline scenario in Mali is also unchanged at the time of RCP.

Based on the local and sectoral expertise and in conjunction with the review of evidences furnished by CME, validation team concludes that there is no change in baseline scenario at the time of RCP in particular to the national/sectoral policies.

Senegal

Senegal's national energy scenario⁴ mentions that only 31.7% population has access to clean fuels and technologies for cooking (% of population) till 2016. Therefore, it is concluded that baseline scenario in Senegal is also unchanged at the time of RCP as majority of population ~70% does not have access to clean energy.

Based on the local and sectoral expertise and in conjunction with the review of evidences furnished by CME, validation team concludes that there is no change in baseline scenario at the time of RCP in particular to the national/sectoral policies.

Burkina Faso:

Burkina Faso's national energy scenario⁵ mentions that only 8.9% population has access to clean fuels and technologies for cooking (% of population) till 2016. Therefore, it is concluded that baseline scenario in Senegal is also unchanged at the time of RCP as majority of population ~91% does not have access to clean energy.

The link also reveals that "The country is an ECOWAS member and, with the rest of the region, adopted a concerted approach to the implementation of the SE forAll Country Action, with the development of the Action Agenda alongside the Renewable Energy and Energy Efficiency Action Plans, and their formal adoption. The Objectives envisaged by the government are to reach a global 95% electricity access (50% in rural areas) and universal access to clean cooking solution in urban areas (65% in rural areas) by 2030. The Government also set a target of 50% Renewable Energy in the electric mix by 2030 (without biomass)". Hence, though a government objective has been defined, it is not guaranteed whether this objective will be achieved in reality and if so, to what extent. Therefore, it is concluded that baseline scenario in Mali is also unchanged at the time of RCP.

Based on the local and sectoral expertise and in conjunction with the review of evidences furnished by CME, validation team concludes that there is no change in baseline scenario at the time of RCP in particular to the national/sectoral policies.

³ <https://www.se4all-africa.org/seforall-in-africa/country-data/mali/>

⁴ <https://www.se4all-africa.org/seforall-in-africa/country-data/senegal/>

⁵ <https://www.se4all-africa.org/seforall-in-africa/country-data/burkina-faso/>

Step 1.2: Assess the impact of circumstances

There are not new national/sectoral policies or circumstances that could affect the baseline scenario during the PoA renewal period. The validation team confirmed that the current baseline identified in the registered PoA-DD is still valid for the second PoA renewal period.

The baseline for each generic CPA remains the same as that in the registered PoA-DD and inline with the relevant mandatory national and/or sectoral policies. The information presented in the generic part of CPA of PoA-DD has been validated by an initial document review and further confirmation has been made based on the interview.

Since, there is no change in the circumstance and hence the circumstance will not have any impact on the current baseline emission. Hence, no need to update the current baseline for the next renewal period.

Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested.

The baseline for each generic CPA remains the same as that in the registered PoA-DD and is in line with the relevant mandatory national and/or sectoral policies. The information presented in the generic part of CPA of PoA-DD has been validated by an initial document review and further confirmation has been made based on the interview.

Hence, no need to update the current baseline for the next renewal period.

Step 1.4: Assessment of the validity of the data and parameter

During the 1st PoA period, PoA was registered applying small scale methodology 'AMS-II.G. ver. 04'. During 2nd Renewal period, PoA has applied valid version i.e. 12.0 of the same methodology AMS-II.G.

Validation team would like to reiterate that the PoA was originally registered on version version 4 of methodology AMSIIG and the methodology has gone through significant changes since than. CME has used the provisions of latest version of applied methodology and discarded some parameters/options for determining baseline fuel consumption and treated as post registration changes and clubbed with the RCP.

Categorically CME has opted for the provision of paras 31 & 32 for determining the baseline fuel consumption and only retained the corresponding ex-ante/monitoring parameter corresponding to option 2 & 3. Para 28 of the applied methodology states:

By savings, i, j due to implementation of efficient thermal devices is estimated as per any of the following options and therefore CME has opted for option 3 and validation team confirms that the approach is in compliance with para 28 of methodology. Therefore deletion of parameters pertaining to other options other than option 2 & 3 is in compliance with para 28 of applied methodology. CME has stated further in the PoA DD that only one option out of these two cited option shall be applied by the CPA complying with para 28. The same has been also included in eligibility criteria of updated PoA DD.

Step 2: Update the current baseline and the data and parameters

Since, the existing baseline scenario is still valid, but following parameters updated/removed by CME in compliance with latest version of methodology.

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Following important data parameters are updated/excluded (as appropriate) from registered PoA-DD:

Data/Parameter (Ex-ante/Expost)	Value in registered PoA-DD	Value in updated PoA-DD	Validation opinion
EF_{projected_fossilfuel,i} (Ex-ante) (Unit: tCO ₂ /TJ, Description: Emission factor of the fuel(s) type i substituted)	81.6 tCO ₂ /TJ	73.2 tCO ₂ /TJ	This update is inaccordance with latest version of applied methodology. Therefore validation team accepts this change, this is worthy to note that all 5 contries included in programme falls under sub sahara Africa. In registered PoA DD this parameter is not included in ex- ante/expost list however mentioned exclusively in section B.6.1. Inclusion of this parameter is in compliance with the applied version of ethodology.
<i>$\eta_{old,i,j}$</i>	Values provided for first CPA at the time of PoA registration. (Ex- ante parameter)	Values updated in line with the latest version of methodology 0.1 Or 0.2 (default values depending on the baseline stoves)	parameter kept monitored complying with the ewquirement of methodology.
C_{c,w}	7 (For Togo)	6 (For all host countries)	Default value of conversion factor from charcoal to wood has been considered in accordance with the applied version of methodology.

	$\eta_{new,i,j}$	Ex-ante define and also part of ex-post monitoring	<p>“the Project participant may choose any of the options below to account for the loss in efficiency (Option 3)” “the option should be identified and fixed ex ante for the entire crediting period in the PDD at the time of registration”</p> <p>Thus, any of the below stated provision as per para 37 will be chosen explicitly at time of the CPA inclusion</p> <p>A default schedule of linear decrease in efficiency up to the terminal efficiency assumed as 20 per cent shall be applied through the life span of the project device⁶; or Manufacturer of project devices shall 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 Determine⁷ the rate of efficiency drop for a representative sample of the first batch of project device i in year y and assume that</p>	In compliance with the latest version of methodology applied.
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Appendix 1. ⁶ If the efficiency of the project devices falls below 20%, it is no longer eligible to be considered a project device.

Appendix 2. ⁷ Example: For the representative sample of Batch 1, if the efficiency of a new project device is 30% and at the end of Year 1, the efficiency is monitored to be 29%; the loss rate is $(30\% - 29\%) / 1 = 1\%$. Then this 1% loss rate is to be assumed to be applicable for all the devices in the first batch and subsequent batches for first year of operation.

			<p>same rate of loss in efficiency applies to all other batches. 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 apply to all subsequent batches. The efficiency of the project devices in the first batch has to be monitored annually through representative samples and this rate of loss in efficiency may be applied correspondingly to all batches; Determine the loss in efficiency annually from a representative sample of each batch and use the actual loss rate that is measured.</p> <p>CPA will indicate which option they chose at the time of inclusion</p>	
	$B_{y,new}$	Parameter defined ex-ante	Parameter removed as it is calculated value, the parameters to arrive on the calculated value are part of monitoring plan.	In compliance with the latest version of methodology applied.
	$B_{old,HH}$	Parameter defined ex-ante (Values for the first CPA defined)	Parameter defined ex-ante, only notation changed. Values to be updated at the time of CPA inclusion.	In compliance with the latest version of methodology applied.
	f_{NRB}	Parameter defined ex-ante for first CPA (For upcoming CPAs at the time of CPA inclusion)	Values to be updated at the time of CPA inclusion.	No change

	By savings/ stove	Parameter defined ex-ante	Parameter removed as it is calculated value, the parameters to arrive on the calculated value are part of monitoring plan.	In compliance with the latest version of methodology applied.
	By savings-charcoal	Parameter defined ex-ante	Parameter removed as it is calculated value, the parameters to arrive on the calculated value are part of monitoring plan.	In compliance with the latest version of methodology applied.
	Parameters (ex-ante/ex-post) other than option 2 & 3 for calculating $B_{y,savings,i,j}$ are deleted.	Parameter defined ex-ante	Deleted.	CME has opted for option 2 & 3 and validation team confirms that the approach is in compliance with para 28 of methodology. Therefore deletion of parameters pertaining to other options other than option 3 is in compliance with para 28 of applied methodology.
	Finally, it is concluded that the original baseline scenario is valid as per "Tool for the assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period v3.0.1.			
Findings	CL 04 has been raised and successfully closed. Refer to appendix 5 for further details.			
Conclusion	Validity of the baseline has been correctly assessed and the parameters are updated as per the Methodology Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period"/17/ in the revised PoA-DD submitted for the renewal of crediting period.			

D.2.3. Estimated emission reductions or net anthropogenic removals

Means of validation	<p>According to AMS-II.G (version 12), the emission reduction under CPAs are calculated as the following:</p> $ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$ <p>Where:</p> <p>i = Indices for the situation where more than one type of project device is introduced to replace the pre-project devices⁸</p>
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⁸ For example, in some instances, full replacement of the pre-project device would require the implementation of more than one project device (e.g. one stove suitable for cooking and the other stove suitable for cooking/boiling water).

- j = Indices for the situation where there is more than one batch of project device
- ER_y = Emission reductions during year y (tCO₂e)
- $ER_{y,i,j}$ = Emission reductions by project device of type i and batch j during year y (tCO₂e)
- LE_y = Leakage emissions in the year y (tCO₂e)

$$ER_{y,i,j} = B_{y,savings,i,j} \times N_{0,i,j} \times n_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossil\ fuel}$$

Where:

- $B_{y,savings,i,j}$ = Quantity of woody biomass that is saved per cookstove device of type i and batch j during year y (tonnes)
- $f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass⁹ (fraction or %)
- $NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried')
- $EF_{projected_fossilfuel}$ = Emission factor of fossil fuels projected to be used to substitute non-renewable woody biomass by similar consumers (tCO₂e/TJ).
- $N_{0,i,j}$ = Number¹⁰ of project devices of type i and batch j commissioned (number)
- $n_{y,i,j}$ = Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y (fraction)
- μ_y = Adjustment to account for any continued use of pre-project devices during the year y

Parameter	Value	Source and validation
$f_{NRB,y}$ Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass	Each CPA will determine prior to inclusion in the PoA.	The validation team through interviews with the CME confirmed that the value will be calculated using tool to calculate f_{NRB} or through the use of valid default values at the time of CPA inclusion.
$EF_{projected_fossilfuel}$ Emission factor of fossil fuels projected to be used to substitute non-renewable woody biomass by similar	73.2 tCO ₂ /TJ	The value is fixed and was found to be consistent with the applied methodology for 2 nd crediting period.

⁹ Default values endorsed by designated national authorities and approved by the Board are available at <http://cdm.unfccc.int/methodologies/standard_base/index.html>.

¹⁰ Project devices may be commissioned in batches.

	consumers		
	$N_{p,HH}$ Average number of persons served per household prior to project implementation	Each CPA will determine prior to inclusion in the PoA.	The validation team through interviews with the CME confirmed that the value will be calculated using a survey conducted by CME or through the use of national data. For surveys, the latest version of the guideline and standard for "sampling and surveys for CDM project activities and programmes of activities" will be used.
	$B_{old,HH}$ Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate thermal energy equivalent to that provided by the project devices	Each CPA will determine prior to inclusion in the PoA.	The validation team through interviews with the CME confirmed that the value will be calculated using a survey conducted by CME or through the use of national data. For surveys, the latest version of the guideline and standard for "sampling and surveys for CDM project activities and programmes of activities" will be used.
	$B_{old,i,j}$ Annual quantity of woody biomass that would have been used in the absence of the project activity to generate thermal energy equivalent to that provided by the project device type i and batch j	Each CPA will determine prior to inclusion in the PoA.	The validation team through interviews with the CME confirmed that the value will be calculated using a survey conducted by CME or through the use of national data. For surveys, the latest version of the guideline and standard for "sampling and surveys for CDM project activities and programmes of activities" will be used.
	$\eta_{old,i,j}$ Efficiency of pre-project device	Each CPA will determine prior to inclusion in the PoA.	The validation team through interviews with the CME confirmed that the value will be based on a representative sample survey of the pre-project devices and fixed ex ante (i.e. there is no need to determine baseline efficiency for each individual household when including in the project activity database). The survey is to be conducted in line with the

	<div> <div></div> <div></div> <div>“Standard for sampling and surveys for CDM project activities and programmes of activities”.</div> </div> <p>Leakage: The default factor of 0.95 is used to account for any potential leakage, as prescribed by the methodology which is found acceptable.</p> <p>CME has submitted the ex-ante emission reduction estimation in a excel sheet/02/. The excel sheet is clear, viewable, non-protected and the calculated values in the sheet are reproducible. Hence, the ex-ante emission reduction calculated for this project is correct.</p>
Findings	CAR 04 has been raised and successfully closed. Refer to appendix 5 for further details.
Conclusion	<p>The assessment team confirms that</p> <ul style="list-style-type: none"> • All assumptions and data used by the CME are listed in the PoA-DD, including their references and sources; • All documentation used by CME as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD; • All values used in the PoA-DD are considered reasonable in the context of the proposed project activity; • The baseline methodology, AMS-II.G, version 12.0 has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; <p>All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.</p>

D.2.4. Validity of monitoring plan

Means of validation	The monitoring plan is in compliance with the monitoring methodology AMS-II.G, version 12.0 /06/. The PoA was originally included applying Small scale methodology AMS-II.G, version 4.0. For the 2 nd crediting period, the version i.e. version 12.0 of the same methodology AMS-II.G has been applied and the monitoring plan of the same has been adopted.					
	As per the AMS-II.G Version 12.0 methodology, the following main parameters will be monitored/fixed ex-ante:					
	<table><tr><th>Sl. No.</th><th>Parameters</th><th>Monitoring procedure</th></tr><tr><td>1.</td><td>$N_{0,i,j}$ Number of commissioned project devices of type i and batch j</td><td><p>Source of data: Sales/distribution record in electronic data management system detailing serial numbers and date of sale/distribution for appliances.</p><p>Measurement procedures (if any): The CPA implementer keeps an electronic database of all stoves sold. As per AMS II.G monitoring shall consist of checking of all devices or a representative sample to determine if they are still operating. The latter option, taking a representative sample, is chosen for the CPA.</p><p>Monitoring frequency: At least once every two years (biennial)</p><p>Justification for the compliance: This</p></td></tr></table>	Sl. No.	Parameters	Monitoring procedure	1.	$N_{0,i,j}$ Number of commissioned project devices of type i and batch j
Sl. No.	Parameters	Monitoring procedure				
1.	$N_{0,i,j}$ Number of commissioned project devices of type i and batch j	<p>Source of data: Sales/distribution record in electronic data management system detailing serial numbers and date of sale/distribution for appliances.</p> <p>Measurement procedures (if any): The CPA implementer keeps an electronic database of all stoves sold. As per AMS II.G monitoring shall consist of checking of all devices or a representative sample to determine if they are still operating. The latter option, taking a representative sample, is chosen for the CPA.</p> <p>Monitoring frequency: At least once every two years (biennial)</p> <p>Justification for the compliance: This</p>				

			<p>monitoring parameter will be used for the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	2.	$N_{y,i,j}$ Number of project devices of type i and batch j operating during year y	<p>Source of data: ICS distribution database and Survey records</p> <p>Measurement procedures (if any): Parameter will be monitored at the CPA Level. Parameter is measured directly based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence/precision levels. Separate samples shall be taken for each batch. If the survey efforts combine two or more CPA, the confidence/precision levels shall be 90/10, however in case micro scale CPA/s is involved in any batch, then the confidence/precision levels shall be followed 95/10 conservatively. The Sampling Frame: Project Database of each CPA (or combined PoA database in case of PoA level sampling) as defined by distribution date, appliance type, serial number, and end-user information.</p> <p>Monitoring frequency: At least once every two years (biennial)</p> <p>Justification for the compliance: This monitoring parameter will be used for the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan</p>
	3.	$n_{y,i,j}$ Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y (fraction)	<p>Source of data: Sales/distribution record in electronic data management system detailing serial numbers and date of sale/distribution for appliances.</p> <p>Measurement procedures (if any): The CPA implementer keeps an electronic database of all stoves sold. As per AMS II.G monitoring shall consist of checking of all devices or a representative sample to determine if they are still operating. The latter option, taking a representative sample, is chosen for the CPA.</p> <p>Consequently, $N_{y,i,j}$ is determined by</p>

			<p>multiplying all devices sold (N) with the proportion of cooking stoves found to be operating in a representative sample, i.e. Popstoves_y</p> <p>Monitoring frequency: At least once every two years (biennial)</p> <p>Justification for the compliance: This monitoring parameter will be used for the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	4.	μ_y Adjustment to account for any continued use of pre-project devices during the year y	<p>Source of data: The CPA applies equation 6 of AMS-II.G, it is a fraction based on monitoring results.</p> <p>Measurement procedures (if any): The surveys will formulate questions and/or collect evidences to determine the frequency of usage of both the project devices and baseline devices.</p> <p>Monitoring frequency: At least once every two years (biennial)</p> <p>Justification for the compliance: This monitoring parameter will be used to adjust to account for any continued use of pre-project devices and will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	5.	$n_{old,i,j}$ Efficiency of the baseline device	<p>Source of data: ICS distribution records</p> <p>Measurement procedures (if any): In case of 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; 0.2 for other types of baseline devices</p> <p>Monitoring frequency: Once at the time of stove distribution</p> <p>Justification for the compliance: This monitoring parameter will be used to adjust to account for any continued use of pre-project devices and will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the</p>

			monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan
	6.	$\eta_{\text{new},i,j}$ Efficiency of the device of each type <i>i</i> and batch <i>j</i> implemented as part of the project activity	<p>Source of data: Efficiency values from water boiling tests (WBTs) conducted on a representative sample of appliances</p> <p>Measurement procedures (if any): The provision of para 37 of applied methodology apply. As per para 37 “the Project participant may choose any of the options below to account for the loss in efficiency (Option 3)” “the option should be identified and fixed ex ante for the entire crediting period in the PDD at the time of registration”</p> <p>Thus, any of the below stated provision as per para 37 will be chosen explicitly at time of the CPA inclusion</p> <p>(a) A default schedule of linear decrease in efficiency up to the terminal efficiency assumed as 20 per cent shall be applied through the life span of the project device ; or</p> <p>(b) Manufacturer of project devices shall 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>(c) Determine the rate of efficiency drop for a representative sample of the first batch of project device <i>i</i> in year <i>y</i> and assume that same rate of loss in efficiency applies to all other batches. 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 representative samples and this rate of loss in efficiency may be applied correspondingly to all batches;</p> <p>(d) Determine the loss in efficiency annually from a representative sample of each batch and use the actual loss rate that is measured.</p> <p>CPA will indicate which option they chose at the time of inclusion,</p> <p>Monitoring frequency: (i) Recorded at the time of commissioning/distribution; (ii) Annual monitoring in case default</p>

			<p>option c or option d are chosen to adjust for efficiency losses as per paragraph 37 of AMS II.G.</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	7.	<p>$NCV_{biomass}$</p> <p>Net calorific value of the non-renewable woody biomass, briquettes or charcoal used in project devices</p>	<p>Source of data: 2006 IPCC Guidelines for National Greenhouse Gas Inventories</p> <p>Measurement procedures (if any): IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried' may be used if fuel used in project device is also woody biomass. If briquette is used as project fuel, NCV shall be measured annually.</p> <p>Monitoring frequency: Yearly</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	8.	<p>$f_{NRB,y}$</p> <p>Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass</p>	<p>The validation team through interviews with the CME confirmed that the value will be calculated using tool to calculate f_{NRB} or through the use of valid default values provide by the DNAs of respective host countries and approved by the CDM EB.</p> <p>This parameter shall be determined at the time of CPA inclusion and fixed ex-ante in generic PoA DD.</p>
	9.	<p>$B_{new,KPT,i,j}$</p> <p>Annual quantity of woody biomass used in tonnes per project device of type</p>	<p>Source of data: The value will be determined from Survey reports through KPT Protocol through representative sampling in accordance with the monitoring plan.</p> <p>Measurement procedures (if any): The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT Protocol listed</p>

			<p>by Clean Cooking Alliance. Representative samples will be monitored as per sampling plan.</p> <p>This parameter is applicable to CPA that use option 2: Kitchen performance test for determining $B_{y,savings}$.</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	10.	<p>Life Span</p> <p>The operating life time of the project device.</p>	<p>Source of data: Manufacturer (certified by a national standards body or an appropriate certifying agent recognized by that body)</p> <p>Measurement procedures (if any): N/A</p> <p>Monitoring frequency: Fixed and recorded at the time of commissioning/distribution. For the CPAs opting for the linear depreciation, this parameter will be ex-ante fixed and shall be defined at the time of CPA inclusion. Therefore this parameter is part of ex-ante as well as ex-post monitoring parameters and shall be finalized during the CPA inclusion depending on the method opted for WBT. Detailed assessment is included in the PRC report submitted with RCP.</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	11.	<p>Date of commissioning of batch j</p> <p>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</p>	<p>Source of data: Internal records</p> <p>Measurement procedures (if any): To be determined at CPA level</p> <p>Monitoring frequency: Fixed and recorded at the time of commissioning/distribution of the last project device in the batch</p> <p>Justification for the compliance: This</p>

		batch	<p>monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	12.	<p>Date of commissioning of project device <i>i</i></p> <p>Actual date of commissioning of project device</p>	<p>Source of data: Internal records</p> <p>Measurement procedures (if any): Every time an ICS is sold/distributed, it is recorded. The information is entered in the CPA's electronic database (either immediately at the time of recording or afterwards). Based on the database, the date of commissioning is determined.</p> <p>Monitoring frequency: Recorded at the time of commissioning/distribution of project devices</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p> <p>Validation team has checked the monitoring parameter and found that the monitoring parameter is complying with the applied methodology i.e. AMS-II.G. version 12 and CME/CPA Implementer is able to implement the monitoring plan.</p>
	13.	<p>$N_{d,HH}$</p> <p>Number of project devices distributed per household</p>	<p>Source of data: Internal records (Database)</p> <p>Measurement procedures (if any): The database will be checked whether households/institutions/SMEs use more than one project ICS. The proportion of households/ institutions/SMEs using more than one project ICS will be conservatively taken into account when calculating the parameter</p> <p>Monitoring frequency: Recorded at the time of commissioning/distribution of project devices</p> <p>Justification for the compliance: This monitoring parameter will be used in the calculation of baseline emissions.</p>
	<p>The monitoring plan will give opportunity for real measurements of achieved emission reductions.</p> <p><u>Sampling</u> The PoA-DD/2/ indicates a sampling plan as per the recommendation outlined in section 5 of survey Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 09/19/ and contains amongst others information related to sampling design, data to be collected and implementation plan. Further, as per the requirements of paragraph 14 of "Tool19: Demonstration</p>		

of additionality of microscale project activities", (Version 09.0), the CPAs also uses the "microscale CDM unit", and hence, the sampling plan is designed on the requirements of the methodology AMS-II.G version 12 and standard (Sampling and surveys for CDM project activities and programmes of activities, version 09.0). Thus, the survey will be conducted to achieve 95/10 confidence/precision for biennial sampling across CPAs and micro scale CPA's and 90/10 for annual sampling. In line with paragraph 23 of Sampling and surveys for CDM project activities and programmes of activities, version 09.0. Besides, CME has set forth provision to apply 95/10 confidence precision to the batch which contains combination of SSC CPA and microscale CPAs, which is considered to be accordance with guideline for sampling and survey Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 09, para 23

Parameter	Sampling approach
$N_{y,i,j}$	<p>The proportional parameter will be estimated through simple random sampling survey.</p> <p>The parameter will be measured directly based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence/precision levels. Separate samples shall be taken for each batch.</p> <p>If the survey efforts combine two or more CPA, the confidence/precision levels shall be 90/10, however in case micro scale CPA/s is involved in any batch, then the confidence/precision levels shall be followed 95/10 conservatively.</p> <p>To estimate the sample size for this parameter the following equation will be used:</p> $n \geq \frac{1.96^2 N \times p (1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.96^2 \times p (1-p)}$ <p>Where: n = Sample size N = Population size (Total number of households/ICS) p = Expected proportion 1.96 = Represents the 95% confidence 0.1 = Represents the 10% relative precision</p>
$\eta_{new,i,j}$	<p>The mean value parameter will be estimated through simple random sampling WBT tests. Measured directly based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence/precision levels. Separate samples shall be taken for each batch.</p> <p>If the survey efforts combine two or more CPA, the confidence/precision levels shall be 90/10, however in case micro scale CPA/s is involved in any batch, then the confidence/precision levels shall be followed 95/10 conservatively.</p> <p>To estimate the sample size for this parameter</p>

		<p>the following equation will be used:</p> $n \geq \frac{1.96^2 NV}{(N - 1) \times 0.1^2 + 1.96^2 \times V}$ <p>Where, $V = (SD/mean)^2$ n = Sample size N = Population size (Total number of households/ICS) Mean = Expected mean of ICS thermal efficiency SD = Expected standard deviation 1.96 = Represents the 95% confidence required 0.1 = Represents the 10% relative precision</p>
	μ_y	<p>The proportional parameter will be estimated through simple random sampling survey. Measured directly based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence/precision levels. Separate samples shall be taken for each batch.</p> <p>If the survey efforts combine two or more CPA, the confidence/precision levels shall be 90/10, however in case micro scale CPA/s is involved in any batch, then the confidence/precision levels shall be followed 95/10 conservatively. To estimate the sample size for this parameter the following equation will be used:</p> $n \geq \frac{1.96^2 N \times p (1-p)}{(N - 1) \times 0.1^2 \times p^2 + 1.96^2 \times p (1 - p)}$ <p>Where: n = Sample size N = Population size (Total number of households/ICS) p = Expected proportion 1.96 = Represents the 95% confidence 0.1 = Represents the 10% relative precision</p>
	$B_{new,KPT,i,j}$	<p>The mean value parameter will be estimated through simple random sampling. To estimate the sample size for this parameter the following equation will be used:</p> $n \geq \frac{1.96^2 NV}{(N - 1) \times 0.1^2 + 1.96^2 \times V}$ <p>Where, $V = (SD/mean)^2$ n = Sample size N = Population size (Total number of households/ICS) Mean = Expected mean of ICS thermal</p>

	<p>efficiency SD = Expected standard deviation 1.96 = Represents the 95% confidence required 0.2 = Represents the 10% relative precision</p> <p>The monitoring plan will give opportunity for real measurements of achieved emission reductions. The monitoring plan has been found to be inline with the latest version 12 of the applied methodology AMS II.G.</p>
Findings	CL 01, CAR 02, CAR 03 and CAR 05 has been raised and successfully closed. Refer to appendix 5 for further details.
Conclusion	<p>The validation team confirms that:</p> <ul style="list-style-type: none"> a) All the values used from official sources and the authenticity of sources has been verified by the validation team and confirms that all relevant parameters to calculate the GHG emissions reductions of the project have been sufficiently considered and the value of the ex-ante fixed parameter used for emission reduction calculation has been determined conservatively and the estimation of ex-post parameters are reasonable. The validation team considers that the monitoring plan has complied with the requirements in the approved methodology. b) The monitoring plan based on the approved monitoring methodology/16/, is included in the PoA-DD and is correctly applied to the CDM PoA. The monitoring plan has been found to be in compliance with the requirements of the applied methodology. The monitoring plan will give opportunity for real measurements of achieved emission reductions. c) The validation team considers that monitoring arrangements described in the monitoring plan is feasible within the project design and the CME will be capable to implement the monitoring plan. d) The DOE by assessing EB86, Annex 04 (Guidelines for sampling and surveys for CDM project activities and programme of activities) and (Standard: Sampling and surveys for CDM project activities and programme of activities)/11/ confirms that the sampling plan is appropriate and plausible and is following the applicable requirements. <p>Sampling objective, sampling size, sampling target, sampling frame, sampling method, field measurements, QA/QC procedures and implementation plan are deemed to be appropriate and plausible according to the sectoral expertise of the DOE and have been further confirmed and substantiated in skype interviews with the CME.</p>

D.2.5. Eligibility criteria for inclusion of CPAs

Means of validation	<p>According to the PoA/01/, the CPAs shall comply with the following eligibility criterion, CME has updated few criteria pertaining to the latest version of methodology used, DOE assessed the changes complying with the CDM EB communication with stakeholders vide ref. no. 10455¹¹ and also kept some additional criteria based on the provisions of Bysaving and consreded as PRC, validation opinion on PRC has been assessed in PRC validation report by the validation team.</p>			
	No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Means of Validation
	1	Geographical boundary	CPA shall be implemented within the geographical boundaries of one of	There is no change in this eligibility criteria in compared to the registered PoA-DD.

¹¹ <https://cdm.unfccc.int/stakeholder/submissions/index.html>

			the host countries: Togo, Burkina Faso, Senegal, Mali and Ghana.	<p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied</p>
	2	Conditions to avoid double counting of GHG emission reductions	CME have procedures in place to avoid double counting with other CPA and other CDM projects. These procedures include having "second-tiers" contracts with stove manufacturers who work under the main manufacturer to ensure that the rights to the ER are all attributed to the CME, and having the CME logo, the CPA name and a serial number on every stove.	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	3	CER ownership	End users receiving ICS under the specific CPA contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA	<p>The revised/added eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion</p>

				complied
	4	Conditions to confirm that CPAs are not part of other CDM project activities or POA	Provide statement/confirmation in the CPA-DD that the CPA is not part of another CDM project activity nor of a POA and is not deregistered CPA or CDM project activity	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	5	Awareness and Agreement of those operating a CPA on PoA subscription	<p>Contractual provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA.</p> <p>In the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation, known as the CPA Implementer, has signed a contractual agreement with the CME to participate in the PoA.</p> <p>This agreement will encompass:</p> <ul style="list-style-type: none"> - Defines the ownership of the carbon emission reduction rights - Covers the CPA implementer's distribution and 	<p>The revised/added eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied</p>

			<p>monitoring related responsibilities</p> <ul style="list-style-type: none"> - Confirms that the ICS to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) - Cedes the PO's rights to the carbon credits generated from CPAs under the PoA to the CME 	
	6	Specification of technology/measure	<p>The CPA will involve the sale or distribution of an improved biomass cooking technology that is proven to have a minimum specified efficiency of 20%</p>	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	7	Conditions to check start date	<p>document very clearly the start date of the CPA and evidence that the start date of the CPA is not prior to the date the PoA-DD was first published for global stakeholder consultation.</p>	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the</p>

				<p>PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	8	Conditions to check compliance with applied methodology	<p>Comply with the applicability criteria of the Methodology AMS II G version 12.0:</p> <ul style="list-style-type: none"> - deploy appliances involving the efficiency improvements in the thermal applications of non-renewable biomass and -in the case of cookstoves, deploy single pot or multi-pot or in-situ cookstoves with the rated efficiency of at least 20% -the aggregate energy savings of a CPA shall not exceed 180 GWh thermal per year -demonstrate that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics. -explain the method of distribution of project devices including methods for avoiding double-counting 	<p>The revised eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied</p>
	9	CPA Crediting Period	CPA starting date of the crediting period is date of inclusion or any date thereafter and crediting period	The revised eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS

			not to exceed the PoA end date. Each CPA shall provide verifiable evidence	for PoA Version 02. Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied
	10	Conditions for additionality	The additionality will be demonstrated following the requirements of Tool 21: Demonstration of additionality of small-scale project activities, version 13.1; Tool19: Demonstration of additionality of microscale project activities, version 09.0; Or requirements of para 17 to 20 of applied methodology	The revised eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02. Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied
	11	Conditions to ensure compliance with other requirement of the methodology	Comply with the generic CPA DD which already ensures compliance with all requirements of the applied methodology, tools and Standards	The revised (editorial improvement) eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02. Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied
	12	POA-specific requirements: local stakeholder consultation and environmental analysis	CME/ CPA implementer will hold a local stakeholder consultation that meets these minimum requirements: -be a physical meeting or remote web-based meeting (considering COVID	The revised (editorial improvement) eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02. Validation team has checked the eligibility

			<p>pandemic or as per applicable regulatory requirements)</p> <ul style="list-style-type: none"> -invite parties that will be impacted by the projects or who are involved in the cook stove sector (end-users, NGO, government agencies) -provide an overview of the project -collect comments from participants -take account of the comments <p>A single stakeholder consultation can be held for multiple CPA located in the same host country provided that the type of cook stove promoted by each CPA is well presented and all the CPA are included within 5 years of the date the meeting was held.</p> <p>Conduct an Environmental Impact Analysis if required by the host country. One EIA can be applicable for several CPA if located in the same host country provided that local laws on EIA do not differ.</p>	<p>criteria and found OK.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	13	Affirmation of non-ODA diversion	<p>State clearly in the CPA-DD the source of public funding, if any and also that there is no diversion of ODA</p>	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility</p>

				criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.
	14	Target group and distribution mechanism	serve households, commercial entities and institutions in the host countries either in urban, peri-urban or rural areas. Distribute the stoves through direct or indirect sale	<p>There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.</p> <p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	15	Baseline parameters to be established at CPA level	Each CPA shall demonstrate how the baseline parameters for baselines not established at the PoA level (that applies for baselines) that are to be calculated at the CPA level have been determined. Parameters to be monitored are listed in CPA-DD	<p>The revised eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This added criteria has been added as a result of PRC undertaken by the CME.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied</p>
	16	Sampling	Provide a sampling method (e.g. in the monitoring plan and baseline studies) that follows the "Standard For Sampling And Surveys for CDM Projects and	There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria.

			<p>Programmes of Activities (Version 9.0). Please refer provision of section I.7.2 of PoA-DD.</p> <p>If leakage related to the non-renewable woody biomass saved by the project activity is found to be true, an adjustment factor of 0.95 will be applied to B_{old} as an alternative to conducting surveys.</p> <p>Sampling across CPA is possible if the CPA are located in the same country and are disseminating the same type of cook stove</p>	<p>The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.</p>
	17	SSC threshold	<p>The SSC Threshold demonstration is subjected to availing the route for additionality demonstration</p> <p>Route 1: (option 2, para 21 of the applied methodology AMS II.G version 12): The CPA-DD will demonstrate that annual energy savings data does not exceed the small threshold of 180 GWh/year, for each year of the crediting period.</p> <p>Route 2 (option 3, para 22 of the applied methodology AMS II.G version 12): Alternatively, if the additionality is demonstrated by Route 2, then the SSC threshold will be limited to 20 GWh per year</p>	<p>The revised eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02.</p> <p>Validation team has checked the eligibility criteria and found OK. This added criteria has been added as a result of PRC undertaken by the CME.</p> <p>This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied</p>

			Route 3 (option 1, para 17-20 of the applied methodology AMS II.G version 12): The CPA-DD will demonstrate that annual energy savings data does not exceed the small threshold of 180 GWh/year, for each year of the crediting period.	
	18	De bundling check	The CPA-DD will demonstrate that the stoves do not realize more than 1.8 GWh of energy savings annually each as a proof that a de-bundling check is not required.	There is no change in this eligibility criteria in compared to the registered PoA-DD except the documents explicitly mentioned to fulfill the criteria. The eligibility criteria is in compliance with the applied methodology i.e. AMS-II.G. Version 12 and also para 124 of the PS for PoA Version 02. Validation team has checked the eligibility criteria and found OK. This criterion was further validated by means of interviews performed with the CME. Therefore, criterion complied.
Findings	CAR 08 FAR#01 have been raised and successfully closed. Refer to appendix 5 for further details.			
Conclusion	The validation team was able to confirm that the eligibility criteria for the renewal of crediting period of PoA-DD is in accordance with the applicable requirements in para 124 of the PS for PoA.			

SECTION E. Internal quality control

>>Following the completion of the assessment process and a recommendation by the assessment team, the validation opinion prepared by Team Leader is independently reviewed by internal Technical Reviewer. TR reviews if all the KBS procedures have been followed and all conclusions are justified in accordance with applicable standards, procedures, guidance and CDM decisions. The TR either is qualified for the technical area within the CDM sectoral scope(s) applicable to project activity or is supported by qualified independent technical expert at this stage.

The Technical Reviewer will either accept or reject the recommendation made by the assessment team. The findings can be raised at this stage and CME must resolve them within agreed timeline.

The opinion recommended by Technical Reviewer will be confirmed by Manager Technical & Certification and finally authorized by the Managing Director on behalf of KBS as final validation opinion. The Technical Reviewer and Manager T&C maybe be same person.

SECTION F. Validation opinion

>>KBS Certification Services Pvt. Ltd. has been contracted by 'Toyola Energy Limited' to perform a validation of the CDM registered PoA 'Promoting Efficient Stove Dissemination and Use in West Africa' (UNFCCC Ref 9666) for renewal of crediting period.

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

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

The review of the Programme of activity design documentation and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The Programme of activity design document correctly applies small scale methodology AMS II G version 12. It is demonstrated that the project baseline scenario is not changed and also all necessary parameters are updated correctly for the 2nd crediting period.

The monitoring plan provides for the monitoring of the project's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design, and it is validation team's opinion that the project participants are able to implement the monitoring plan.

In summary, it is validation team's opinion that the CDM PoA 'Promoting Efficient Stove Dissemination and Use in West Africa' (UNFCCC Ref 9666) meets all relevant UNFCCC requirements for the renewal of the crediting period. Hence, KBS requests the renewal of the crediting period of the PoA.

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable quality level
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
CME	Coordinating/managing entity
CO ₂	Carbon dioxide
COP	Conference of Parties
CPA	Component Project Activity
CPA DD	Component Project Activity Design Document
DOE	Designated Operational Entity
DNA	Designated National Authority
ERs	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
ICS	Improved cook stoves
IPCC	Intergovernmental Panel on Climate Change
KBS	KBS Certification Services Pvt. Ltd.
LDC	Least Developed Country
MCS	Myanmar Ceramic Society
MOP	Meeting of Parties
MP	Monitoring Plan
MR	Monitoring Report
NCV	Net Calorific value
PE	Project Emissions
PCP	Project cycle procedure
PoA	Programme of Activity
PoA-DD	Programme of Activity Design Document
PRC	Post Registration Changes
QA/QC	Quality Assurance/Quality Control
SME	Small and Medium Enterprises
SSC-PoA	Small scale Programme of Activity
TA	Technical Area
T&C	Technical & Certification
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable quality level
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Appendix 3. Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>

Area(s) of Technical Expertise	
Sectoral Scope	Technical Area
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
Energy demand	TA 3.1. Energy Demand
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure
Approved by (Manager C & T)	Akhilesh Joshi
Approval date:	11/12/2015

Personnel Name:		Ms. Deboshmita Dey	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input type="checkbox"/>
Technical Reviewer	<input type="checkbox"/>	Local Expert	<input type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope		Technical Area	
Energy industries (renewable/non-renewable sources)		TA 1.2: Energy generation from renewable energy sources	
Waste Handling and Disposal		TA 13.1 Waste Handling and Disposal	
Approved by (Manager C & T)		Sanjay Kandari	
Approval date:		14/01/2021	

Personnel Name:		Tushar Chaudhari	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope		Technical Area	
Energy Industries (renewable/non-renewable sources)		TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
Energy industries (renewable/non-renewable sources)		TA 1.2: Energy generation from renewable energy sources	
Energy demand		TA 3.1. Energy Demand	
Waste Handling and Disposal		TA 13.1 Waste Handling and Disposal	
Approved by		Manager Competency & Training	
Approval date:		02/09/2020	

Appendix 4. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	CME	Revised PoA-DD (Final)	Version 16, dated 14/07/2021	CME
2	CME	Ex- ante ER Calculation Sheet	Version 01, dated 12/04/2021	CME
3	CME	Registered PoA-DD	version 15, dated 22/10/2014	Publically available
4	DNV	Validation Report	Dated 23/10/2014	Publically available
5	UNFCCC	Web page in UNFCCC, , previous validation and verification reports	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/T5UX6I3PDJQ4BV1Z8LYNO09W2HASGR/view	Publically available
6	UNFCCC	AMS-II.G. Version 12, "Energy efficiency measures in thermal application of non-renewable biomass"	Version 12	Publically available
7	SOS Energie Togo	WBT Test report	Jan 2018	CME
8	UNFCCC	Kyoto Protocol (1997)	Web link	Publically available
9	UNFCCC	PoA-DD-FORM	Version 9.0	Publically available
10	UNFCCC	CDM Project Standard for PoAs	Version 2.0	Publically available
11	UNFCCC	Standard: Sampling and surveys for CDM project activities and programme of activities	Version 09	Publically available
	UNFCCC	Guidelines for sampling and surveys for CDM project activities and programme of activities	Version 04	Publically available
12	UNFCCC	CDM Validation and Verification Standard for PoAs.	Version 02	Publically available
13	UNFCCC	Glossary "CDM terms"	Version 10	Publically available
14	CME	Field Monitoring study report	Dated 24/12/2018	CME
15	Solar energy laboratory	Clay stove test report	Dated 30/05/2011	CME
16	Climate solutions consulting	Update to the baseline report	March 2020	CME
17	UNFCCC	Methodology Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period"	Version 3.0.1	Publically available

Appendix 5. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	01	Section no.	D.2.4	Date: 26/05/2021
Description of CL				
CME shall clarify how they are complying the requirement of para 287-291 of CDM PS for PoAs, version 02 applicable for RCP. This has not been demonstrated in relevant sections of PoA DD.				
Project participant response				Date: 14/07/2021
PoA DD is revised to include provisions of para 287-291 of CDM PS for PoAs, version 02, refer the revised PoA DD addressing the requirements of cited paras of CDM PS, version 02 for PoAs.				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
CME has updated the revised PoA DD and demonstrated the details of compliance with respect to paras 287-291 of CDM PS for PoAs. Step wise demonstration of tool 'Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period' has been incorporated. The assessment is provided by validation team in main section of validation report. Finding is closed.				

CL ID	02	Section no.	D.1.2	Date: 26/05/2021
Description of CL				
Under section D.1 of the submitted PoA-DD, the start date is not correct. As per the registered PoA-DD, the date is 24/02/2011, however in the revised PoA-DD, it has been mentioned as 24/06/2020.				
Project participant response				Date: 14/07/2021
Start date is revised in accordance with the registered PoA DD, it was a typo error.				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
Start date is revised in accordance with the registered PoA DD and validation team concluded that the date is the same date which has been validated in the registered PoA DD. Finding is closed.				

CL ID	03	Section no.	D.1.3	Date: 26/05/2021
Description of CL				
Validation team noted that there is change in CME from the registered PoA DD and the change is PRC, kindly confirm that new CME will follow the same management system as it was stipulated in registered PoA. Please refer para 198 of CDM PCP for PoAs in conjunction with par 248 of CDM PS for PoAs, version 2. New CME shall clarify how they will comply the cited requirements.				
Project participant response				Date: 14/07/2021
CME confirms that it will comply the management system of PoA in line with the registered PoA DD, declaration to this effect is also attached with response.				
Documentation provided by project participant				
Change of coordinating/managing entity for programme of activities, CDM-CME-FORM				
DOE assessment				Date: 21/07/2021
CME submitted a declaration in UNFCCC format that they shall comply the requirements of original management plan as per the registered PoA DD. Validation team clubbed this assessment in the PRC submitted with this RCP, the assessment is provided by the validation team in the PRC validation report.				
Finding is closed.				

CL ID	04	Section no.	D.2.2	Date: 26/05/2021
Description of CL				

The PoA has geographical boundaries in five countries however the baseline scenario and fnrb values reported by CME under section H.4 of the submitted PoA DD is only for Togo, the rationale behind reporting value for one country is not sufficiently clear? Refer the CDM PS for PoAs for reporting baseline scenario in conjunction with PoA DD filling guideline.	
Project participant response	Date: 14/07/2021
CME would like to clarify that fnrb is to be determined at the CPA level, not programme level. PoA DD has been revised to include all parameters in accordance with applied version of methodology and in accordance with the provisions of registered monitoring plan.	
Documentation provided by project participant	
<i>Revised PoA DD</i>	
DOE assessment	Date: 21/07/2021
The response provided by the CME in conjunction with the revised PoA DD has been accepted, fnrb values are fixed ex-ante in accordance with registered monitoring plan, Finding is closed based on the review of revised PoA submitted by CME.	

Table 2. CAR from this validation

CAR ID	01	Section no.	D.2.1	Date: 26/05/2021
Description of CAR				
<ol style="list-style-type: none"> Under section I.1 of the submitted PoA-DD, CME shall mention the versions of the tools described. Under section I.2 of the submitted PoA-DD, for the applicability criterion 1, CME shall mention the type of cookstove to be used in this PoA. Under section I.2 of the submitted PoA-DD, the justification for following applicability criteria as per the applied methodology is missing: <ol style="list-style-type: none"> Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics; For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology; The CDM-PDD or CDM-PoA-DD/CPA-DD shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices. 				
Project participant response				Date: 14/07/2021
<ol style="list-style-type: none"> Revised PoA DD includes all the recent versions of tools and applicable guidelines. The applicability criteria is revised now, refer revised PoA DD. All missing applicability criteria of applied version of methodology are included in the revised PoA DD with appropriate justifications. 				
Documentation provided by project participant				
<i>Revised PoA DD</i>				
DOE assessment				Date: 21/07/2021
<ol style="list-style-type: none"> Latest version are included in the revised PoA DD submitted by the CME, revised PoA DD includes references of all latest tools connected with methodology/PoA. Section I.2 is revised now, the revised PoA DD found including all the details justifications of revised applicability criteria of methodology. Section I.2 is revised now, the revised PoA DD found including all the details justifications of revised applicability criteria of methodology. 				
Based on the review of responses provided by the CME and revised PoA DD, finding is closed.				

CAR ID	02	Section no.	D.2.4	Date: 26/05/2021
Description of CAR				

1. In section C of the submitted PoA DD, CME has referred EB 68, Annex 27, however the cited guideline is no more valid, CME shall refer the latest applicable versions of tools/guideline for demonstrating additionality.
2. Equations shall be labelled in line with recent version of methodology, moreover, incorporate the equation number for clarity. It was also noticed that CME has not explicitly mentioned which option out of 3 options provided in latest version of methodology is used by CME in calculation of *By,saving,i,j*. Para 28 of applied methodology allows only one option to be chosen.
3. Under section C the value of NCV of biomass is not consistent with methodology, CME has referred the value as 0.015 TJ/T however the applied version of methodology has the value 0.0156 TJ/T.
4. PP has used the value of Bold under section 'C' citing a source in South Africa, however it is not clear the time period of the report as it seems sourced from the registered PoA DD. CME shall clarify how the value is applicable in PoA is applicable considering the value is sourced from South African context and it's relevance during RCP? Moreover the registered PoA has the provision of determination at the level of CPA.

Project participant response	Date: 14/07/2021
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1. Recent version of additionality tool's reference has been added in the revised PoA DD,
2. Equations are labelled in line with the notifications mentioned in the applied version of methodology, moreover options are explicitly included for *By,saving*. Registered PoA DD has provisions of all four methods and corresponding monitoring parameters. However, the PoA DD at the time of RCP has been corrected to include only two methods. This change has been considered as PRC by the CME, refer the revised PoA DD with detailed changes made.
3. CME has referred the value as 0.0156 TJ/T in the revised PoA DD. Refer attached PoA DD with the responses.
4. Value of Bold has to be determined at CPA level not at the time of PoA, the changes are made in revised PoA DD in line with the generic PoA DD registered. Refer the revised PoA DD attached with the response.

Documentation provided by project participant
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<i>Revised PoA DD</i>

DOE assessment	Date: 21/07/2021
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1. Latest version of additionality tool's reference has been added in the revised PoA DD, validation team observed that PP has added new information in line with the revised/updated version of methodology and eligibility criteria updated by CME accordingly. The updation has been treated as PRC and clubbed with RCP. Validation team provided detailed assessment in the PRC report submitted.
2. Equations are labelled in line with the notifications mentioned in the applied version of methodology, options 2 & 3 are explicitly included for *By,saving*. Rest options deleted and treated as PRC by the CME and clubbed with RCP. Validation team provided detailed assessment in the PRC report submitted.
3. CME has referred the value as 0.0156 TJ/T in the revised PoA DD.
4. Value of Bold has to be determined at CPA level not at the time of PoA, the changes are made in revised PoA DD in line with the generic PoA DD registered. The justification and corresponding corrections found complying the requirement of methodology/registered PoA DD.

Finding is closed.

CAR ID	03	Section no.	D.2.4	Date: 26/05/2021
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Description of CAR

Under section I.6.1 of the submitted PoA-DD, CME has provided all the options for calculation of *By,savings,i,j* in contradictory to para 28 of methodology, which allows only one option to be opted. CME has also included all parameters in ex-ante applicable for 3 options. The approach is not in line with para 28 of applied methodology. CME shall explicitly adhere requirements of para 28 of applied methodology.

Project participant response	Date: 14/07/2021
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Registered PoA DD had provision of all four options at programme level and specific method at CPA level, CME has not kept two options and removed two as part of PRC. Refer the revised PoA DD with the details of opted methods and removed method.

Documentation provided by project participant
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<i>Revised PoA DD</i>

DOE assessment	Date: 21/07/2021
Options 2 & 3 are explicitly included for By,saving. Rest options deleted and treated as PRC by the CME and clubbed with RCP. Validation team provided detailed assessment in the PRC report submitted. Only one options shall be chosen by a CPA and that will be chosen at the time of CPA inclusion, eligibility criteria updated by CME to include this change. Validation team provided detailed assessment in the PRC report submitted. Finding is closed.	

CAR ID	04	Section no.	D.2.3	Date: 26/05/2021
Description of CAR				
<ol style="list-style-type: none"> Under section I.6.2 of the submitted PoA-DD, the following parameters are missing as per the registered PoA-DD: <ol style="list-style-type: none"> Bold for charcoal Wood to charcoal conversion factor For the monitoring of μ_y & $\eta_{(new,i,j)}$ CME has opted both the alternatives which are relevant of KPT and WBT both. CME shall use the relevant methodology after choosing the one option for BY,saving,i,j in accordance with methodology. 				
Project participant response				Date: 14/07/2021
<ol style="list-style-type: none"> The missing parameters are included in revised PoA DD by CME. Refer our response in CAR#03. 				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
<ol style="list-style-type: none"> All relevant parameters in accordance with the PRC proposed are now part of revised monitoring plan, details assessment on the change has been treated as PRC. A separate PRC report is prepared and submitted along with this RCP. One option shall be chosen during the CPA inclusion, CME has kept both options open at the PoA level and specific option shall be chosen by the CME at the time of CPA inclusion. Eligibility criteria added to reflect this change and treated as PRC. Validation team has provided the detailed assessment in the vPRC validation report. Finding is closed. 				

CAR ID	05	Section no.	D.2.4	Date: 26/05/2021
Description of CAR				
Under section I.7.1 of the submitted PoA-DD, the monitoring frequency mention for the parameter " $t_{y,i,j}$ " is inconsistent with the applied methodology. Kindly also clarify whether this parameter is applicable in their case?				
Project participant response				Date: 14/07/2021
The parameter is no more included in PoA DD and excluded as part of PRC clubbed with the RCP, refer our response in previous connecting finding.				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
CME responded that this option/parameter is now excluded as PRC and therefore finding is closed.				

CAR ID	06	Section no.	D.1.3	Date: 26/05/2021
Description of CAR				
Under section J of the submitted PoA-DD, CME shall mention that this pertains to second crediting period.				
Project participant response				Date: 14/07/2021
PoA DD updated to include the correct information of crediting period.				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 14/07/2021
The correction made by CME in the revised POA DD, correction is meeting the PoA DD filling requirements. Finding is closed.				

CAR ID	07	Section no.	-	Date: 26/05/2021
Description of CAR				
Under Appendix 7 of the submitted PoA-DD, CME has reported the details regarding summary of post registration changes since and it is not applicable under RCP. Refer PoA DD filling guideline, this section is applicable when RCP is clubbed with PRC.				
Project participant response				Date: 14/07/2021
The previous PRCs have been excluded however the PRC clubbed with RCP are now incorporated in the revised PoA DD.				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
The revised PoA DD found meeting the requirement of PoA DD filling requirements. PRC summary of recent PRC clubbed with RCP is part of PoA DD (Appendix 7). Finding is closed now.				

CAR ID	08	Section no.	D.2.5	Date: 26/05/2021
Description of CAR				
<ol style="list-style-type: none"> Under eligibility criteria, CME has not updated additionality criteria by apply the provisions of latest version of methodology as well as tool. Refer the stakeholder communication 10455 available on below link. https://cdm.unfccc.int/stakeholder/submissions/index.html CME has not updated sampling requirements in accordance with latest version of methodology, sampling standard. 				
Project participant response				Date: 14/07/2021
<ol style="list-style-type: none"> Revised PoA DD includes the criteria for additionality as indicated by DOE, refer revised PoA DD addressing the finding. Sampling requirements in accordance with latest version of methodology have been incorporated in revised PoA DD. Revised PoA DD attached herewith. 				
Documentation provided by project participant				
Revised PoA DD				
DOE assessment				Date: 21/07/2021
<ol style="list-style-type: none"> The eligibility criteria with respect to additionality has been revisited by CME, all changes are part of PRC now. Revised PoA DD also includes eligibility criteria change to reflect this updatation and has been treated as PRC, the detailed assessment is part of PRC validation report. Sampling requirements in accordance with latest version of methodology have been incorporated in revised PoA DD. The corrections also included as part of PRC, the detailed assessment is part of PRC validation report. <p>Finding is closed.</p>				

Table 3. FAR from this validation

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

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Document information

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