Validation report form for inclusion of component project activities

(Version 02.0)

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

BASIC INFORMATION		
Title and UNFCCC reference number of the programme of activities (PoA)	Distribution of Improved Cook Stoves in Sub-Saharan Africa UNFCCC Ref. No.: 9007	
Version numbers of the PoA-DD to which this report applies	Version 17, dated 27/12/2018	
Title and reference number of each CPAs to be included	CPA Ref. no.	**Title**
	9007-0005	Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005
Sectoral scopes for each CPA	CPA Ref. no.	**Sectoral scopes**
	9007-0005	Sectoral Scope 3: Energy demand
Applied methodologies and standardized baselines for each CPA	CPA Ref. no.	**Selected methodologies and standardized baselines**
	9007-0005	AMS-II.G (version 4) - Energy efficiency measures in thermal applications of non-renewable biomass
Version number of the validation report	Version 02	
Completion date of the validation report	11/02/2019	
Coordinating/managing entity (CME)	C-Quest Capital Malaysia Global Stoves Limited	
Host Party(ies)	Republic of Zambia	
Estimated amount of annual average greenhouse gas (GHG) emission reductions or GHG removals by sinks in the crediting period (tCO2e), per CPA	CPA Ref. no.	**tCO2e**
	9007-0005	83,802
Name and UNFCCC reference number of the DOE	Carbon Check (India) Private Ltd. UNFCCC Ref.No.: E-0052	
Name, position and signature of the approver of the validation report	Amit Anand, CEO	

SECTION A. Executive summary

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C-Quest Capital Malaysia Global Stoves Limited (CQC) has commissioned Carbon Check (India) Private Ltd. (CCIPL) to perform the validation of the proposed small scale CPA "Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005" requesting to be included in the PoA. CCIPL was commissioned to assess the information in the CDM-CPA-DD-FORM for the CPA titled "Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005" (hereafter called "the CPA") against the requirements for including CPA to the registered PoA "Distribution of Improved Cook Stoves in Sub-Saharan Africa" and further documentation requirements for including CPA to a PoA.

This report summarizes the findings of the validation of the small-scale Component Project Activity Design Document (CDM-CPA-DD-FORM), performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting and eligibility criteria for inclusion of the CPA as established in the approved revised PoA-DD /B02. The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the simplified modalities and procedures for small scale CDM project and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

The assessment of a CPA requesting to be included in a PoA shall ensure that all the requirements (as defined in the form of eligibility criteria) determined in the PoA are met. The assessment was performed on the basis of the eligibility and additionality criteria established in the PoA and the UNFCCC criteria for including CPA to a Programme of Activities (PoA) under the Clean Development Mechanism (CDM), as well as criteria given to provide for consistent project operations, monitoring and reporting according to AMS-II.G, Version 04.0 /B03/.

The main objective of the PoA and the CPA(s) is promotion, distribution / installation of fuel-efficient improved cook stoves (ICS) in Zambia. The ICS disseminated through this programme will replace the prevailing inefficient three-stone fires or traditional pot support with stoves that combust firewood more efficiently and improve thermal transfer to pots, thus saving fuel and lowering greenhouse gas emissions.

The validation scope is defined as an independent and objective review of the Component Project Activity Design Document (CPA-DD /01/). The CPA-DD /01/ is reviewed against the relevant UNFCCC CDM criteria for validation and registration of PoA. The validation team has, based on the recommendations in the Validation and Verification Standard for Programmes of Activities (VVS for PoAs), version 02.0 /B01-1/, employed a rule-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

While carrying out the validation, CCIPL determines if the CPA complies with the requirements of UNFCCC, specifically the applicability conditions of the selected methodology and also assesses the claims and assumptions made in the CPA-DD /01/ without limitation on the information provided by the project participants.

The report is based on the assessment of the CPA-DD /01/ undertaken through consultations with CME, application of standard auditing techniques including but not limited to document reviews, and CME interviews, review of the applicable/applied methodology and its underlying formulae and calculations.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed CPA thus confirming the project design as document is sound and reasonable and meets the stated requirements and identified criteria.

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	Interviews	Validation findings
1.	Team Leader / Validator / Technical Expert		IR	Singh	Vikash Kumar	CCIPL	X	NA	X	X

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Agarwalla	Sanjay Kumar	CCIPL
2.	Approver	IR	Anand	Amit	CCIPL

SECTION C. Means of validation

C.1. Desk/document review

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The validation was performed primarily based on the review of the CPA-DD /01/ and review of the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

On site inspection of the project is not carried out due to the following reasons:

- ✓ The estimated emission reduction from the project as per the CPA DD is less than 100,000 tCO2/year.
- ✓ the CPA is not implemented (at the time of CPA Inclusion validation) and there is no pre-project information that is relevant to the requirements for inclusion of the CPA and that may not be traceable after the inclusion.
- ✓ there are no assessment required at on site inspection due to the reason that all parameters which are fixed ex-ante are either based on already approved revised PoA DD or the applied baseline & monitoring methodology.
- ✓ There are no sampling/survey involved/carried out by PP, which requires assessment on site.
- ✓ The LSC was carried our at PoA level, so no stakeholders were required to be interviewed.

The validation was performed primarily based on the review of the CPA-DD /01/ ,review of the supporting documentation and web-research. Validation team based on above justification

confirms that validation based desk reviw are sufficient for the purpose of validation.This confirms the requirements of §184 of CDM VVS for PoA (version 02.0) /B01-1/.

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Verma	Pooja	C-Quest Capital (CQC)	05/02/2019 (Skype based)	Technology to be used in the CPA; CPA implementation staus; ICS distribution procedure; Baseline scenario and additionality; Methodology applicability; Eligibility criteria for inclusion of CPA in the PoA; Record keeping and monitoring plan and ER calculations	Vikash Kumar Singh

C.4. Sampling approach

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Not Applicable

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

Areas of validation of compliance (SECTION D)	No. of CL	No. of CAR	No. of FAR
Titles of the CPAs and corresponding generic CPAs			
Compliance with CPA-DD form		01	
General description of the CPAs	--		
Application of methodologies and standardized baselines			
• Reference to methodologies and standardized baselines			
• Project boundary, sources and GHGs			
• Baseline scenario			
Estimation of emission reductions			
• Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals			
• Data and parameters fixed ex ante			
• Ex ante calculation of GHG emission reductions or net anthropogenic GHG removals			
• Summary of ex ante estimates of GHG emission reductions or net anthropogenic GHG removals			
Monitoring plan			
• Data and parameters to be monitored			
• Description of the monitoring plan			
Start date, crediting period type and duration	--		
Environmental impacts			
Local stakeholder consultation			
Eligibility for inclusion			
Others (Editorial findings)		--	

Total	00	01	00

SECTION D. Validation findings

D.1. Proposed CPAs and corresponding generic CPAs

Specific-case CPA title and reference number	Version number of the specific-case CPA-DD	Host Party	Generic CPA title, identification/reference number	Version number of the PoA-DD into which the CPA is included
Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005	Version 01.2 dated 10/02/2019	Zambia	Distribution of Improved Cook Stoves in Sub-Saharan Africa-[insert country name]-CPA-XXX	Version 17 dated 27/12/2018

D.2. Compliance with CPA-DD form

Means of validation	DR, I
Findings	CAR-01 has been raised and satifcatorily closed.
Conclusion	Through means of document review and interviews with CME, the validation team considers that the description of the CPA in the CPA-DD titled “Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005”, as described in the CPA-DD /01/ is accurate and complete; meets the requirements to be included in the PoA titled “Distribution of Improved Cook Stoves in Sub-Saharan Africa” /B02/ and correctly apply the baseline and monitoring methodology AMS-II.G, Version 04 /B03/ and requirements of VVS for PoAs (version 02.0) /B01-1/. The validation team confirms that the requirements of the CDM-CPA-DD-FORM filling guidelines /B04-3/ has been appropriately met.

D.3. General description of the CPAs

Means of validation	DR, I
Findings	--
Conclusion	The following description of the proposed component project activitiy as per CPA-DD /01/ is verified: The CPA titled “Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005” is developed under the Small-Scale Programme of Activities (PoA) titled “Distribution of Improved Cook Stoves in Sub-Saharan Africa” /B02a/, which is coordinated and managed by C-Quest Capital Malaysia Global Stoves Limited (CQC). The CPA of the PoA /B02/ involves the promotion and installation of ICS in Zambia, as per the CPA-DD /01/ and involve approximately 22,000 domestic fuel-efficient improved cook stoves (ICS) in Zambia. The main objective of this CPA is ICS dissemination and will replace the prevailing inefficient three-stone fires or traditional stoves, which combust wood more efficiently and improve thermal transfer to pots, hence saving fuel and lowering greenhouse gas emissions. The amount of woody biomass that would be saved due to the implementation of the CPA shall directly translate into reduction of GHG emissions. The CPA implementer are CQC and EcoEye Co., Ltd., as confirmed by reviewing the CPA-DD /01/. The CME shall be responsible to perform quality control activities for the proposed CPA and the same has been checked and confirmed by reviewing the CPA-DD /01/ and interviews with the representative of the CME. As per the CPA DD /01/, it is intended that under this CPA single pot, TLC-CQC Rocket Stove will be distributed. However, at the time of implementation multi pot or portable stoves (e.g. EcoZoom Dura, EZY) may also be distributed. TLC-CQC Rocket Stove proposed under the CPA a type of single pot fixed cook stoves with an average thermal efficiency of 34.5 % /03/. The thermal efficiency of the stove

	was verified through review of Water Boiling Test (WBT) results of Cook Stoves as performed by a third party /03/. The CPA is only replacing wood-fuel stoves. As per the CPA-DD /01/, the TLC-CQC Rocket Stove is a simple design with basic features. As verified /17/, the design uses a total of 16 readily available building bricks that are made by the household using locally available clay. The average size of the brick used on the TLC-CQC Rocket Stove /17/ which is produced using a standard mold is 22.5cm x 11cm x 6.5cm. The bricks are mortared together using locally available material (clay soil, cow dung, and sand) for better insulation and heat loss reduction. The mud mortar is a mix of 5 liters clay, 5 liters sand, 5 liters manure with 5 liters of water. Start date for the CPA is expected on 01/03/2019 as stated in the CPA-DD /01/. CPA Implementer has also submitted a declaration in this respect /09/. As the expected start date of the CPA is after the start date of PoA (on 17/01/2012), the validation team found it acceptable. This confirms the requirements of §200 of CDM VVS for PoA (version 02.0) /B01-1/. The validation team based on the review of the declaration from the CME /07/ confirms that there is no double counting of emission reductions due to the implementation/inclusion of the CPA, as the CPA does not belong to or are included in any other PoA or stand-alone CDM project. The validation team has cross-checked this from the UNFCCC website /B05-1/ and interviews with representatives of CME and confirms that there is no double counting, the double-counting risk is prevented by the unique serial number prefixed by "CQC-SSA" /06/ borne by each distributed cookstove. Furthermore, the validation team based on the review of CPA-DD /01/ and CME manual /16/ confirms that in order to avoid double counting, the CME has adopted a provision of a record keeping system. The record keeping system for the proposed CPA under the PoA includes detailed sales information collected from end-user through registration process /06/. The registration process /06/ contains a provision that the carbon credits generated from the use of ICS are transferred to the CME of the PoA. The information from the registration process /06/ will be entered into the CPA database /13/. Double counting of emissions reductions will be avoided because each CPA and each ICS distributed will have a unique identification number. In addition, the duration of the crediting period for all the CPA was confirmed to be renewable at 7 years and is as per requirements of §201 of CDM VVS for PoA (version 02.0) /B01-1/. The CPA implementer intends to disseminate about 22,000 stoves and given that the CPA would be implemented as described in the CPA-DD /01/, it is likely that the CPA achieves the estimated amount of emission reductions of 5,86,613 /02-(b)/ tCO_2e over the 7 years renewable crediting period, leading to an annual average of 83,802 /02/ tCO_2e as indicated in the final CPA-PDD /01/ and also in the ER calculation sheet /02/. In addition, the steps used for ER calculations were found to be in conformance with the requirements of the methodology AMS-II.G, Version 04 /B03/. Based on the information furnished by the CME /10/, no ODA contributes to the financing of the CPA. The requirements related to de-bundling are not applicable to the CPA as the ICS to be distributed under the CPA satisfy the condition to qualify as a 'microscale CDM unit' as per the requirements stated in §9(b) and §17 of Methodological Tool "Demonstration of additionality of microscale project activities" (version 8.0) /B10/. Based on the review of the ER spreadsheet /02/ and CPA-DD /01/, the validation team deems this to be appropriate. This is deemed appropriate to the validation team and is in conformance with the requirements of "Methodological tool: Assessment of debundling for small-scale project activities".and §206 of CDM VVS for PoA (version 02.0) /B01-1/.

D.4. Application of methodologies and standardized baselines

D.4.1. Reference to methodologies and standardized baselines

Means of validation	DR, I
Findings	-
Conclusion	The validation team has reviewed the CPA-DD /01/ along with relevant supporting documentation provided by CME and the combined assessment (for the requirement to be checked during inclusion of the CPA in the PoA) is provided in Appendix-5. This is in conformance with the requirements of §193 of CDM VVS for PoA (version 02.0) /B01-1/.

D.4.2. Project boundary, sources and GHGs

Means of validation	DR, I
Findings	-
Conclusion	As per the applied methodology AMS-II.G, Version 04 /B03/, "Energy efficiency measures in thermal applications of non-renewable biomass", the boundary of a typical CPA under this PoA confines to 'is the physical, geographical site of the efficient systems using biomass.' (as per §3 of the applied methodology). The information has been also correctly given in section B.2 of the CPA-DD /01/ and is consistent with the description of project boundary provided in the PoA-DD /B02/. The physical delineation of the CPA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for the CPA. For the CPA, a leakage factor of 0.95 has been considered to account for use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources. This value is the default value provided under §13(a) of the applied methodology AMS-II.G, Version 04 /B03/. The methodology indicates CO_2 as the only GHG from baseline as well as project activity sources to be included in the boundary. Validation team confirms that the justification provided by the CME is reasonable and evidenced. Besides, there are no other sources, which are impacted by the projects and not addressed by the applied methodology. This is in conformance with §3 of the applied methodology /B03/ and §194 of CDM VVS for PoA (version 02.0) /B01-1/.

D.4.3. Baseline scenario

Means of validation	DR, I
Findings	-
Conclusion	For the CPA, the baseline scenario has been identified in accordance with the §4 of the methodology AMS-II.G, Version 04 /B03/. As stated in the applied methodology AMS II.G, Version 04 /B03/ and the CPA-DD /01/, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs. Thus, the above baseline scenario is considered to be accurate and in conformance with the requirements of §4 of the applied methodology /B03/ and §195 of CDM VVS for PoA (version 02.0) /B01-1/.

D.5. Estimation of emission reductions

D.5.1. Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals

Means of validation	DR, I
Findings	-
Conclusion	The equations and choices provided in the applied methodology /B03/ are correctly quoted in the CPA-DD /01/. The emission reductions of the CPA of the PoA would be calculated using the formulae mentioned in the applied methodology AMS-II.G (Version 04.0) /B03/. The parameters and equations presented in the PoA-DD /B02/, CPA-DD /01/ and ER spread-sheet /02/ have been compared with the information and requirements presented in the methodology /B03/. Validation team based on the review of CPA-DD /01/ and the ER spread sheet /02/ and other supporting documents, confirms that the formula are correctly presented for the determination of emission reductions at CPA level and the values of the input parameters used are accurate, appropriate and consistent. Thus, the equations and parameters applied to calculate the emission reductions are considered to be accurate and in conformance with the requirements of §197 (a) of CDM VVS for PoA (version 02.0) /B01-1/.

D.5.2. Data and parameters fixed ex ante

Means of validation	DR, I
Findings	-
Conclusion	Ex-ante parameters provided under section B.4.2 of the CPA-DD /01/ are found to be appropriate and in line with the applied methodology AMS-II.G (version 04.0) /B03/. Ex-ante parameters of the proposed CPA are as follows:

Parameter	Description	Verified Value	Verified Source
B_{old}	Quantity of woody biomass used in absence of the project activity (per stove) from fire wood in the country/region and fuel-type specified in the CPA as defined below	5.695 tonnes/year	As per the approved revised PoA-DD of the PoA. The validation team deemed the value to be appropriate and correct.
η_{old}	Efficiency of 3-stone fire or traditional pot support cooking method (system being replaced)	0.1	Default value as per AMS-II.G. Vesion 04.0) /B03/. The validation team deemed the value to be appropriate and correct.

	$f_{NRB,y}$	Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass	0.81	As per the approved revised PoA-DD of the PoA. The validation team deemed the value to be appropriate and correct.
	$NCV_{biomass}$	Net calorific value of the non-renewable woody biomass that is substituted	0.015	Default value as per AMS-II.G. (Version 04.0) /B03/. The validation team deemed the value to be appropriate and correct.
	$EF_{projected\_fossilfuel}$	Emission factor for the substituion of non-renewable biomass by similar consumers	81.6 tCO_2/TJ	2006 IPCC Guidelines for National Greenhouse Gas Inventory /B07/. The validation team deemed the value to be appropriate and correct.
	L	Leakage Adjustment Factor	0.95	Default value as per AMS-II.G. (Version 04.0) /B03/. The validation team deemed the value to be appropriate and correct.

Thus, the data and parameters fixed ex-ante are considered to be accurate and in conformance with the requirements of §197(b) of CDM VVS for PoA (version 02.0) /B01-1/.

D.5.3. Ex ante calculation of GHG emission reductions or net anthropogenic GHG removals

Means of validation	DR, I
Findings	-
Conclusion	The equations and choices provided in the applied methodology /B03/ are correctly quoted in the CPA-DD /01/. The emission reductions due to the CPA has been calculated using the formulae mentioned in the applied methodology AMS-II.G (Version 04.0) /B03/ and the approved revised PoA-DD /B02/. The total ex ante emission reductions resulting from the CPA for the entire first renewable crediting period of seven years is estimated to be 5,86,613 /02/ tCO_2e, leading to an annual average of 83,802 tCO_2e. The validation team reviewed the ER spread-sheets calculations /02/ and confirms the same to be correct. The validation team conducted assessment of emission reductions calculation. The parameters and equations presented in the CPA-DD /01/, as well as other applicable documents, have been compared with the information stipulated in the methodology /B03/. The assumptions and data (both ex-ante and ex-post) used to determine the emission reductions are described in the CPA-DD /01/ and all the

	sources have been checked and confirmed by validation team. Based on the reviewed information, it can be confirmed that the sources used are correctly quoted and interpreted in the CPA-DD /01/. The values in the CPA-DD /01/ are considered to be reasonable based on the documentation and references reviewed, as well as, the result of the interviews. The baseline methodology has been correctly applied according to the requirements.

D.5.4. Summary of ex ante estimates of GHG emission reductions or net anthropogenic GHG removals

Means of validation	DR, I
Findings	-
Conclusion	The estimation of ER values is carried out based on equations given in the applied methodology AMS-II.G (Version 4.0) /B03/ and conforms to the requirements of section 8.3.4 (titled 'Estimation of emission reductions') of CDM VVS for PoA (version 02.0) /B01-1/. The total ex ante emission reductions resulting from the CPA for the entire first renewable crediting period of seven years is estimated to be 5,86,613 /02/ tCO2e, leading to an annual average of 83,802 tCO_2e. The validation team reviewed the ER spread-sheets calculations /02/ and confirms the same to be correct.

D.6. Monitoring plan

D.6.1. Data and parameters to be monitored

Means of validation	DR, I
Findings	-

Conclusion

The monitoring plan presented in the CPA-DD /01/ complies with the requirements of the PoA-DD /B02/ and the applied monitoring methodology /B03/. The validation team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The validation team through a document review and interviews with the relevant stakeholders has reviewed the procedures. The information provided has allowed the validation team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME.

The parameters /01/, /B02/ that are to be monitored ex-post are:

Parameter	Data unit	Description	Frequency
$n_{y,i}$	Number of stoves	Number of stoves still in operation during the monitoring period as determined by the monitoring survey in each stove vintage. This includes total number of stoves distributed/installed in the entire CPA.	Annually
$t_{y,j}$	fraction	Fraction of monitoring period the stove is in operation (days in operation/total days in monitoring period)	Annually
$\eta_{new,y}$	fraction	Continuing efficiency of ICS	Annually
SSy	percentage	The percentage of ongoing baseline stove use within the population of in-use ICS in each vintage during a monitoring period.	Annually

In summary, the parameter(s) to be monitored have been presented correctly according to requirements and are considered in accordance with the applied methodology /B03/ and approved revised PoA-DD /B02/. This is in conformance with the requirements of §198(a) of CDM VVS for PoA (version 02.0) /B01-1/.

D.6.2. Description of the monitoring plan

Means of validation	DR, I
Findings	-

Conclusion	The monitoring plan presented in the CPA-DD /01/ complies with the requirements of the approved revised PoA-DD /B02/ and the applied monitoring methodology /B03/. The validation team of CCIPL has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found. The validation team through a document review and interviews with the relevant stakeholders has reviewed the procedures. The information provided has allowed the validation team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME. The responsibilities and institutional arrangements for data collection and archiving have been clearly provided. The information provided in the CPA-DD /01/ could be confirmed based on the interviews and also through the submitted documentary evidence namely CME management manual /16/ covering all requirements as stated in section B.5.1 and B.5.2 of CPA-DD /01/. Based on the same, it can be confirmed that the CME and the CPA implementer will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

D.7. Start date, crediting period type and duration

Means of validation	DR, I
Findings	--
Conclusion	Start date for the CPA is expected to be 01/03/2019 as stated in the CPA-DD /01/. CPA Implementer has also submitted a declaration in this respect /09/. As the expected start date of the CPA is after the start date of PoA (on 17/01/2012), the validation team found it acceptable. The expected operational lifetime of the CPA is considered to be 21 years. The above is in conformance to the requirements of §200 of CDM VVS for PoA (version 02.0) /B01-1/. In addition, the duration of the crediting period for the CPA was confirmed to be renewable at 7 years and is as per requirements of §201 of CDM VVS for PoA (version 02.0) /B01-1/.

D.8. Environmental impacts

Means of validation	DR, I
Findings	-
Conclusion	As mentioned in the PoA-DD /B02/, the environmental impact analysis has to be carried out at the CPA level. However, the validation team observed that conducting environment impact analysis is not mandatory as per the host party requirements for the type of project under the proposed CPA (installation/distribution and subsequent operation of improved cookstoves). Thus, the CME has not conducted an EIA which is deemed to be appropriate to the validation team. This is in conformance with the requirements of §203, §210 and §211 of CDM VVS for PoA (version 02.0) /B01-1/ and deemed appropriate to the validation team.

D.9. Local stakeholder consultation

Means of validation	DR, I
Findings	-
Conclusion	It has been indicated in the PoA-DD /B02/ that LSC is carried out at PoA level. Hence further validation is not required here.

D.10. Eligibility for inclusion

Means of validation	DR, I
Findings	-
Conclusion	All the eligibility criteria required for the inclusion of the CPA under the PoA have been addressed in the CPA-DD /01/. The stated confirmation against each eligibility criteria has been checked / assessed and found acceptable by the validation team and complete assessment is provided in Appendix-6.

SECTION E. Internal quality control

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

SECTION F. Validation opinion

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Under the validation (by means of document review and interviews with stakeholders), the validation team considers that the description of CPA titled "Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005" as described in the CPA-DD /01/ is accurate and complete; meets the requirements to be included in the PoA titled "Distribution of Improved Cook Stoves in Sub-Saharan Africa" /B02/ and correctly applies the baseline and monitoring methodology AMS-II.G, Version 04.0 /B03/.

Standard auditing techniques have been used for the validation of the project. An analysis, as provided by the applied methodology, demonstrates that the proposed CPA is not a likely baseline scenario. Emission reductions attributable to the CPA are additional to any that would occur in the absence of the project activity. Given that the CPA is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the CPA-DD /01/.

The validation is based on the information made available to CCIPL, as well as the engagement conditions detailed in this report. The validation has been performed following the VVS requirements /B01-1/.

The validation was executed in the following steps so far:

- Receipt of CPA-DD /01/
- Desk review of revised CPA-DD applying AMS-II.G "Energy efficiency measures in thermal applications of non-renewable biomass" Version 04.0
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report
- Interview with the CME
- Follow up actions (interviews) for cross checking data
- Review of responses for CARs/CLs
- Issue of the final validation report

The CPA correctly applies the baseline and monitoring methodology of the PoA namely AMS-II.G, Version 04, "Energy efficiency measures in thermal applications of non-renewable biomass" /B03/.

The validation did not reveal any information that indicates that the CPA can be seen as a diversion of ODA funding.

The CPA-DD contains monitoring plan for the monitoring of the emission reductions from the project. The monitoring arrangements described in the monitoring plan are feasible within the

project design and it is CCIPL's opinion that the project participants are able to implement the monitoring plan.

By the implementation of improved cooking stoves replacing the traditional cookstoves, the project activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and provide long-term benefits to the mitigation of climate change.

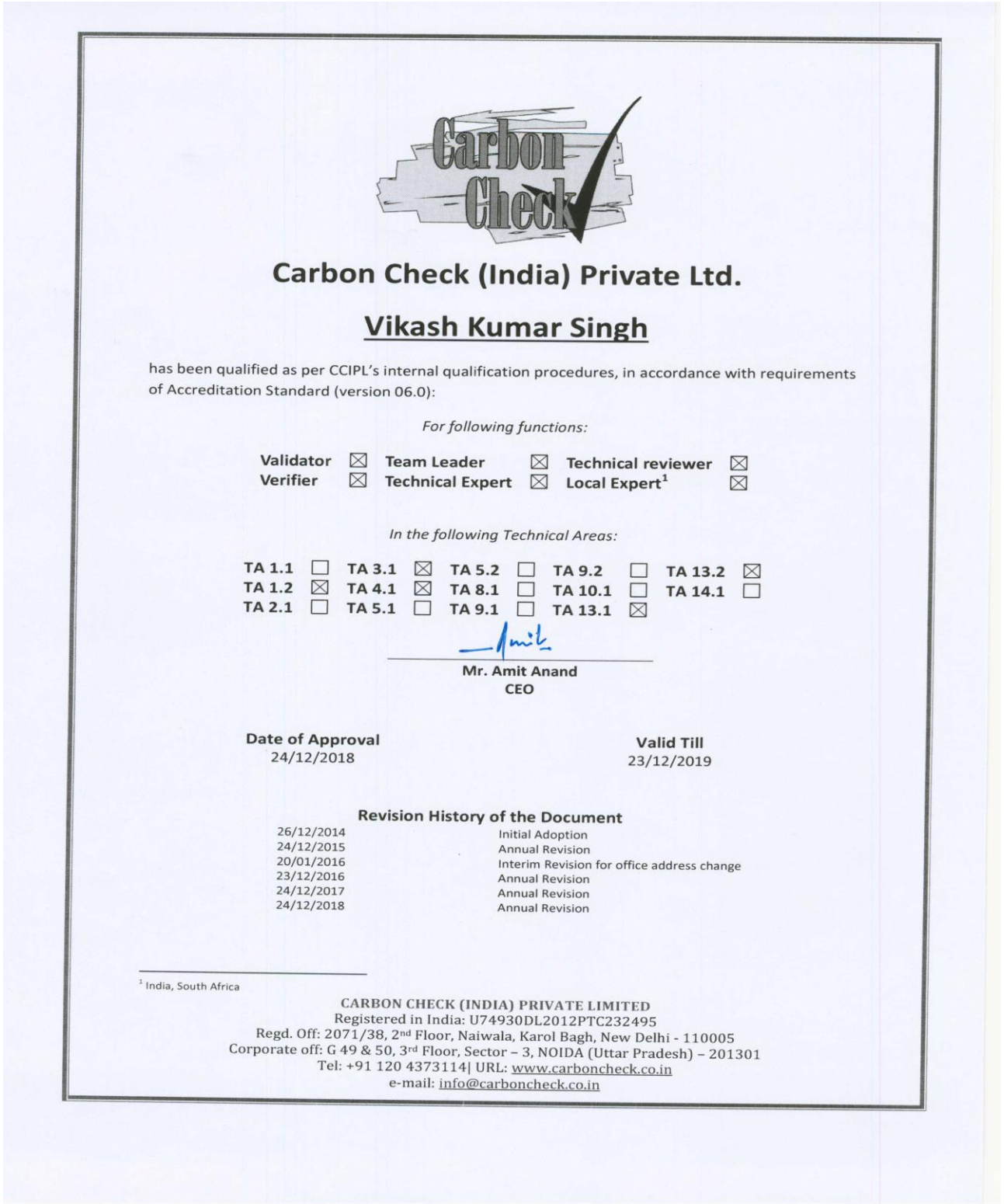
During the course of validation, one (01) CAR was raised and satisfactorily closed.

The single purpose of this report is its use during the inclusion process (of the specific CPA). The review of the CPA-DD /01/, subsequent follow-up interviews and further verification of references have provided CCIPL, with sufficient evidence to determine the fulfilment of stated criteria in the PoA-DD /B02/ and the CPA-DD /01/. In the opinion of CCIPL, the CPA meet all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. CCIPL recommends the CPA for inclusion in the registered PoA.

Appendix 1. Abbreviations

Abbreviations	Full Texts
BE	Baseline Emission
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CQC	C-Quest Capital Malaysia Global Stoves Limited
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
CL	Clarification Request
CME	Co-ordinating or Managing Entity
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COP/MOP	Conference of Parties/ Meeting of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAO	Food and Agricultural Organization
FAR	Forward Action Request
FVR	Final Validation Report
GHG	Greenhouse Gas
GWh	Giga Watt Hours
I	Interview
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
kWh	Kilo Watt Hours
L	Leakage
LSC	Local Stakeholder Consultation
MoV	Means of Verification
MoC	Modalities of Communications
MW	Mega Watt
MWh	Mega Watt Hours
NCV	Net Calorific Value
NOx	Nitrogen Oxides
NRB	Non-renewable Biomass
ODA	Official Development Assistance
OSV	On Site Visit
PE	Project Emission
PoA	Programme of Activities
PoA-DD	Programme of Activities design document
PP	Project Participant
PS	Project Standard
SD	Sustainable Development
t	Tonne
TLC	Total Land Care
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Expert[1]	☒

In the following Technical Areas:

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

Mr. Amit Anand
CEO

Date of Approval
24/12/2018

Valid Till
23/12/2019

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision

[1] India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector – 3, NOIDA (Uttar Pradesh) – 201301
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Carbon Check (India) Private Ltd.

Sanjay Agarwalla

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	☒	**Team Leader**	☒	**Technical reviewer**	☒
Verifier	☒	**Technical Expert**	☒	**Local Expert**[1]	☒

In the following Technical Areas:

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

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

Date of Approval
24/12/2018

Valid Till
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Revision History of the Document

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[1] India

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e-mail: info@carboncheck.co.in

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	CQC	CPA-DD	Version 01.2, dated 10/02/2019	CQC
/02/	CQC	Emission reduction calculation spread-sheet corresponding to /01/.	--	CQC
/03/	Aprovecho Research Center.	WBT Report of independent stove efficiency tests performed by Aprovecho Research Center	--	CQC
/04/	CQC & ECO EYE	CPA implementer self-declaration that all stoves will be installed within the boundary of Zambia and are wood stoves.	Dated 28/01/2019	CQC
/05/	CQC	Sample/Template of CPA project database	--	CQC
/06/	CQC/TLC	Photograph of a sample ICS with unique serial number	--	CQC
/07/	CQC	A self-declaration from CME attesting that this CPA is not a part of any other registered PoA or CDM	Dated 28/01/2019	CQC
/08/	CQC	A self-declaration from CME regarding the approval of this CPA for inclusion into the PoA and description of ICS promotion and distribution methods	Dated 28/01/2019	CQC
/09/	CQC & ECO EYE	A self-declaration from CPA Implementer for the appropriateness of the start date of the CPA	Dated 28/01/2019	CQC
/10/	CQC	A self-declaration from the CME confirming that investment finance for this CPA is not from diversion of ODA funds	Dated 28/01/2019	CQC
/11/	TLC	Cook stove User Guide	--	CQC
/12/	Ministry of land and natural resources, Zambia	Letter of No-Objection issued by DNA of Zambia	Ref. No. MLNREP/6/6/25	CQC
/13/	CQC	Template of Registration Card containing provision for demonstrating the following: • Recording of ICS end user contact information • Confirmation that ICS end user is a household • Confimation that participation of ICS end user is voluntary • Confimation that the rights of CERs generated from ICS usage will be transferred from the end user to the CME • Confirmation that the end user previously used three-stone fire or traditional pot support and did not/does not own and use an ICS	--	CQC
/14/	CQC/Ecoeye Co. Ltd.	Agreement between CQC as CME and Ecoeye Co. Ltd. as PP and CPA Implementer	Dated11/09/2017	CQC
/15/	CQC	Cook Stoves Monitoring and Training Manual		CQC

/16/	CQC	CME manual		CQC
/17/	TLC	Technical Specifications of Stove (TLC Construction brochure)	--	CQC
/18/	CQC & ECO EYE	CPA implementation schedule	--	CQC
/B01/	UNFCCC	1. CDM Validation and Verification Standard for Programme of Activities (Version 02.0). 2. CDM Project Standard for Programme of Activities (Version 02.0) 3. CDM Project Cycle Procedure for Programme of Activities (Version 02.0)	http://cdm.unfccc.int/	Others
/B02/	UNFCCC	Approved Revised PoA-DD, version 17, dated 27/12/2018	http://cdm.unfccc.int/	Others
/B03/	UNFCCC	AMS-II.G. Energy efficiency measures in thermal applications of non-renewable biomass (version 04.0)	http://cdm.unfccc.int/	Others
/B04/	UNFCCC	PoA Specific guidelines / standards / Forms published by UNFCCC: 1. Guideline: Sampling and surveys for CDM project activities and programmes of activities (Version 04.0) 2. Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities (Version 04.0) 3. Instructions for filling out the component project design document form for CDM component project activities (Version 08.1) 4. Component project activity design document form for CDM component project activities (CDM-CPA-DD-FORM), (Version 08.1)	http://cdm.unfccc.int/	Others
/B05/	-	Websites: 1. www.unfccc.int 2. http://www.ipcc.ch 3. https://maps.google.co.in/ 4. http://www.pciaonline.org/testing 5. http://www.goldstandard.org 6. http://www.v-c-s.org	-	Others
/B06/	UNFCCC	Glossary of CDM terms (version 09.1)		Others
/B07/	IPCC	IPCC Guidelines for National Greenhouse Gas Inventory (2006)	Dated 2006	Others
/B08/	UNFCCC	Methodological Tool “Demonstration of additionality of microscale project activities” (version 8.0)	http://cdm.unfccc.int/	Others

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

Table 1. CLs from this validation

CL ID	XX	**Section no.**		**Date:**
Description of CL				
Project participant response				**Date:**
Documentation provided by project participant				
-				
DOE assessment				**Date:**

Table 2. CARs from this validation

CAR ID	01	**Section no.**		**Date:** 05/02/2019
Description of CAR				
As per §171 of Project Standard for PoA, version 02.0, *"The coordinating/managing entity shall provide the references (titles, versions and UNFCCC reference numbers) of the selected methodologies and, where applicable, of the selected standardized baselines that are applied to the proposed CPA, including any other methodologies or methodological tools to which the selected methodologies refer, in accordance with the corresponding generic CPA."* Validation team noted that CPA DD has refered version 01.0 of project standard, which is obsolete.				
Project participant response				**Date:** 06/02/2019
Version number of the Project Standard for PoA has been corrected in the CPA DD.				
Documentation provided by project participant				
Revised CPA-DD; version 01.1				
DOE assessment				**Date:** 06/02/2019
Required revision has been done in the CPA DD; checked and confirmed by the validation team. CAR is closed.				

Table 3. FARs from this validation

FAR ID	xx	**Section No.**		**Date:** DD/MM/YYYY
Description of FAR				
Not Applicable.				
CME response				**Date:** DD/MM/YYYY
Documentation provided by CME				
DOE assessment				**Date:** DD/MM/YYYY

Appendix 5. Assessment of methodological applicability of the CPA to be included into the PoA

S.No.	Methodology Applicability Criteria	DOE Assessment
1.	This category comprises appliances involving the efficiency improvements in the thermal applications of non-renewable biomass. Examples of these technologies and measures include the introduction of high efficiency biomass fired cook stoves or ovens or dryers and/or improvement of energy efficiency of existing biomass fired cook stoves or ovens or dryers.	The CPA will involve dissemination and implementation of TLC-CQC Rocket Stove (as per CPA DD, at the time of implementation multi pot or portable stoves (e.g. EcoZoom Dura, EZY) may also be distributed) cook stoves with an average thermal efficiency of 34.5%. The thermal efficiency of the stove was verified through review of Water Boiling Test (WBT) of Cook Stoves performed by Aprovecho Research Center /03/. Thus, the proposed CPA complies with the requirements of this particular applicability criteria of the methodology.
2.	Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	Non-renewable biomass has been used in the Zambia, since 31 December 1989. This was confirmed based on the review of published literature in the form of FAOs Global Forest Resources Assessment report (2010) /B08/ and information contained in the approved revised PoA-DD /B02/. Thus, the proposed CPA complies with the requirements of this particular applicability criteria of the methodology.
3.	The use of this methodology in a project activity under a programme of activities is legitimate if the following leakages are estimated and accounted for, if required on a sample basis using a 90/30 precision for the selection of samples, and accounted for: a) Use of non-renewable woody biomass saved under the project activity to justify the baseline of other CDM project activities can also be a potential source of leakage. If this leakage assessment quantifies a portion of non-renewable woody biomass saved under	Leakage has been accounted by multiplying B_{old} by a net to gross adjustment factor of 0.95. The same is in line with §22(c) of the applied methodology /B03/. This was confirmed based on the review of CPA-DD /01/. Thus, the proposed CPA complies with the requirements of this particular applicability criteria of the methodology.

	the project activity that is then used as the baseline of other CDM project activities then Bold is adjusted to account for the quantified leakage; b) Increase in the use of non-renewable woody biomass outside the project boundary to create non-renewable woody biomass baselines can also be a potential source of leakage. If this leakage assessment quantifies an increase in the use of nonrenewable woody biomass outside the project boundary then B_{old} is adjusted to account for the quantified leakage; c) As an alternative to subparagraphs (a) and (b), old B can be multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.	
4.	The following further conditions apply for the value of fraction of non-renewable (fNRB) applied in a component project activity (CPA) of a POA. The choice between (a) conduct own studies to determine the local fNRB value and then apply those values in the CPAs; and (b) use default national values approved by the Board; shall be made ex ante. A switch from national value i.e. choice (b) to sub-national values i.e. choice (a) is permitted, under the condition that the selected approach is consistently applied to all CPAs.	The value of non-renewable biomass fraction (f_{NRB}) is 0.81. This is as per the approved revised PoA DD. Thus, the proposed CPA complies with the requirements of this particular applicability criteria of the methodology.

Appendix 6. Assessment of the response to the requirements of the eligibility criteria for inclusion of CPA into the PoA

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Description of this CPA in relation to the criterion and supporting evidence	DOE Assessment
1	Conditions to check the target group of ICS.	Promote and install / distribute ICS in/to residential households in rural, urban, and peri-urban areas[1] 25 that use wood or charcoal fuel following the SSC-PoA specifications.	Indication of ICS model to be distributed / installed, geographic scope of distribution /installation, and thermal efficiency tests to confirm model is a high efficiency biomass fired cook stove.	Under this CPA, Single pot TLC Rocket Stove is intended to be distributed to residential rural wood-fuel using households (later in the CPA other models may be added). Manufacturer's specification states that TLC-CQC Rocket Stove has an efficiency of 34.5%, a significant improvement over three stone fires and traditional pot supports used for cooking. Efficiency test results have been provided to the validating DOE.	Based on review of CPA-DD /01/, it is confirmed that the CPA involves promotion and installation of TLC-CQC Rocket Stove (ICS) (as per CPA DD, at the time of implementation multi pot or portable stoves (e.g. EcoZoom Dura, EZY) may also be distributed) in residential households of Zambia and will utilise wood fuel. The TLC-CQC Rocket Stove is a fixed single pot ICS that has a thermal efficiency of 34.5%, in accordance with manufacturer's specifications and evidenced by a WBT conducted by an independent third party /03/. **Conclusion:** Based on the above assessment, validation team

[1] For the purposes of the PoA, peri-urban areas fall within the definitions of urban areas in each of the countries and are therefore considered like urban areas.

					concludes that the subject CPA complies with this eligibility criterion of the PoA.
2	Geographical boundaries of CPAs consistent with the geographical boundary of the PoA.	Be implemented entirely within a single fuel-specific geographical boundary (as specified in Part I Section A.5 of the PoA-DD) according to the targeted fuel type, fuel-consumption cluster[2]27 (if applicable), and host country region[3]28 of the CPA29	Self-declaration by CPA Implementer indicating single fuel-specific geographical boundary of the CPA. The possible geographic boundaries should be within the limits outlined in Part I Section A.5 of this document.	The CPA implementer self-declares that all stoves will be sold within the boundary of Zambia and are wood stoves. Same was provided to the validating DOE.	Validated against a self declaration letter /04/ issued by the CPA implementer regarding the CPA which mentions the geographical boundary (across Zambia) of the CPA and further confirms that all the project stoves will employ wood as fuel. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
3	Conditions to ensure that each ICS under CPAs that will be included meet the criteria of microscale unit and remain within those thresholds throughout the crediting period of the CPAs.	According to the Methodological Tool (Tool 19): Demonstration of additionality of microscale project activities (version 8.0) para 9: Energy efficiency units that aim to achieve energy savings at a scale of no more than 20 gigawatt hours per year are additional if any one of the conditions below is satisfied:	Section (b) of the applicability criteria is satisfied: (i) ER spreadsheet (ii) Statement in Specific CPA indicating that Improved cook stoves under the PoA will be distributed for household use only.	Thermal energy saving of each ICS is approximately 0.01685 GWh_{th}/year that is far below the threshold value. Calculation sheet demonstrating same has been submitted to the DOE. CPA implementers' self- declaration on distribution of ICS to households has been submitted to DOE.	Validated against ER calculation excel spread-sheet /02/ and CPA-DD /01/. The energy savings per stove is equal to 0.01685 GWh_{th}/year and is below the 'microscale CDM unit' threshold of 600 MWh thermal/year. This has been verified by reviewing the CPA ER calculation excel sheet /02/. Moreover, all ICS under this CPA will be distributed only to

[2] A fuel-consumption cluster is a population that has different fuel consumption patterns than other populations as defined by the fuel-consumption baseline studies attached to the PoA-DD. Each fuel consumption cluster is considered a homogeneous population.

[3] Country regions are defined in the fuel-consumption baseline studies attached to the PoA-DD and may include an entire country.

		(a) The geographic location of the project activity is in an LDC/SIDS or SUZ of the host country identified by the government in accordance with the paragraph 8(a)(i) above; (b) The project activity is an energy efficiency activity with both conditions (i) and (ii) below satisfied: (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours; (ii) End users of the subsystems or measures are households/communities/ SMEs.			households within Zambia. This has been verified by reviewing the CPA-DD /01/. Thus, the validation team concludes that the CPA complies with the criteria stated in §9 of Methodological Tool "Demonstration of additionality of microscale project activities" (version 8.0) and consists of micro-scale CDM units. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
4	Conditions related to the database requirements of ICS user.	Have a database that will uniquely identify and define households in which ICS have been installed or distributed31. In addition, each stove itself will be uniquely identified with a serial number clearly starting with "CQC-SSA"	Outline of the status of the database, a database (empty of stoves if no stoves have been added to the CPA), and description of CPA database.	A project database is being developed. This database will include all the information contained on the Registration Card (or ICT/SMS) - including the serial number. The database will be sortable by customer name, contact details (if available), stove model, location (address/ geo-coordinates), date of purchase, retailer/distributer, serial number and be available to the DOE at the time of	Based on review of sample project database /05/, validation team confirms that there is a provision of database for the CPA of the PoA that will uniquely identify and define households in which ICS have been installed or distributed. Moreover, each ICS in the CPA will have a unique serial number starting with the prefix "CQC-SSA". No individual

				verification	serial number can be in more than one CPA, so it will not be possible for one stove to be counted in two different CPAs. Furthermore, along with the stove serial number, the database will also include end user contact details including location (address/ geocoordinates), stove model of stove, date of purchase, retailer/distributer. The above assessment is based on review of CME manual /16/ (which describes the process of registration) and sample project database /05/. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA..
5	Conditions to ensure compliance with the applicability of the applied methodologies.	Comply with the applicability conditions set out in the methodology AMS II.G version 4 "Energy efficiency measures in thermal applications of non-renewable biomass" and further described in Part II Section B.2 of the PoA-DD;	• Thermal efficiency tests of stove to be installed/distributed; • Statement that documentation has been provided to the DOE demonstrating that non-renewable biomass has been used since 31 December 1989 within the CPA boundaries; • Statement on the	CPA compliance with the three applicability criteria are evidenced by the following: • TLC-CQC Rocket Stove planned to be installed under this CPA is a single pot fixed cook stove that has an efficiency of 34.5% as per the manufacturer's specification, hence over the 20% minimum specified in the methodology (in case any other model of stove will be used for this	The complete assessment of methodological applicability of the proposed CPA is provided in Appendix-5 above. **Conclusion:** Based on the above assessment (provided in Appendix-5), validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.

			adoption of a default gross adjustment factor of 0.95 for leakage. -	CPA, it will have to comply with same eligibility criteria) • Demonstration of use of non-renewable biomass since 31 December 1989 within the boundary of Zambia has been detailed in Annex 3 of the PoA DD; • Consideration of default gross adjustment factor of 0.95 for leakage is demonstrated through emission reduction calculation.	
6	Conditions to avoid double counting of GHG emission reductions or net anthropogenic GHG removals, such as unique identifications of product and end-user locations.	Do not involve households already using an ICS - including households involved in any other CPA or CDM or other voluntary scheme (such as Gold Standard, VCS, VER+[32]) project involving the distribution or installation of ICS, and households which have purchased or received an ICS on a commercial or non- commercial basis (e.g. NGO distributed or government distributed stoves);	– Outline of how each ICS will be uniquely identified. – Statement of how CPA will be cross-checked to confirm no double counting with other CPAs, PoAs or projects (in the CDM or other carbon credit schemes). – Statement of how households will confirm that they currently do not own an ICS (whether part of a carbon scheme or not). -	Each ICS in this CPA will be identified by a unique combination of customer name and geographical location, as well as a serial number. The serial number will be a unique number which will allow for a clear distinction between the stoves from this CPA with others. No individual serial number can be repeated within the CPA or other CPAs belonging to same PoA, thus ensuring that each stove is counted only once in the proposed CPA. In addition, the CPA has been cross-checked against other CPAs in this PoA, CPAs in any other PoA , CDM project activity operating in the country using the UNFCCC, the Gold Standard, and other relevant voluntary carbon schemes to ensure that the CPA is not included in any other PoA, CDM project	Every ICS sold under the CPA will have a unique serial number starting with the prefix “CQC-SSA” and will have a unique combination of customer name and geographical location. No individual serial number can be in more than one CPA thus will ensure that no ICS is counted more than once in two or more CPAs under one or different PoAs. Besides, when a new ICS registration card is filled out, or sent via SMS or ICT, the customer will acknowledge that he/she is a household, previously used a three-stone fire or traditional pot support and did not previously own any ICS. This will ensure that no customer will be included in a new CPA if he/she already owns an ICS.

				activity or voluntary project activity. New customers will also be asked to confirm (via Registration Card or similar method) that the ICS will be used for domestic purpose only and that they currently do not own an ICS (whether part of a carbon scheme or not). The registration card will be submitted to DOE at the time of verification.	The above assessment is based on review of the CPA-DD /01/, the CME manual /16/ (which describes the process of registration), photograph of sample ICS containing unique serial number /06/ and sample database containing provision for indicating unique serial number of ICS /05/ and training manual /15/. In addition, each CPA will be cross- checked with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC /B05-1/, the Gold Standard /B05-5/ or any other relevant voluntary carbon schemes /B05-6/ to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
7	Conditions to confirm that CPAs are neither registered as CDM project activities,	Not be registered as individual CDM project activities nor included in another registered SSC-PoA, as well as in	Statement in Specific CPA indicating that at the time of CPA inclusion, no other CPA using the same name was found in	At time of inclusion of this CPA, no other CPA using the same name was found in any other PoA or in a CDM project activity operating in the	Validation team has reviewed the CPA-DD /01/ and the CME manual /16/ which mentions the information to be collected when an ICS is installed,

	included in another registered PoAs, nor the project activities that have been deregistered.	any other voluntary scheme (such as Gold Standard, VCS, VER+);	any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard, and other relevant voluntary schemes.	country using the UNFCCC, the Gold Standard, and other relevant voluntary schemes. The search was conducted by the CME via web on the relevant websites of the registries.	including unique stove serial number. Each ICS will be identified by a unique identification serial number, which make the CPA unique from other CPAs. Validation Team has searched the UNFCCC website /B05-1/ and cross checked that these particular CPA is not the part of any other registered project. In addition, each CPA will be cross- checked with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard /B05-5/ or any other relevant voluntary carbon schemes /B05-6/ to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity. The CME has provided a self-declaration letter /07/ attesting that the CPA is not a part of any other registered PoA or CDM project. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.

8	Conditions to confirm the approval of CPA by the CME for inclusion of CPA into the PoA.	Be approved by the CME prior to its incorporation into the SSC-PoA;	Declaration from CME that CPA received approval for incorporation into PoA.	CQC has approved the proposed CPA via self-declaration letter. Same was provided to the validating DOE.	The proposed CPA has been approved by the CME (CQC) for inclusion into the PoA. A self-declaration /08/ by the CME was provided to the validation team. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
9	Conditions to check the start dates of CPAs through documentary evidence.	Be able to provide documentary evidence of the start date;	Self-declaration from CME or CPA Implementer stating the starting date of the CPA according to the relevant CDM guidance.	A self-declaration from CPA Implementer was provided to the validator mentioning the start date.	The expected start date of the CPA is indicated as 01/03/2019. The CME along with the CPA Implementer plans to start the installation of ICS in rural households of Zambia from 01/03/2019 onwards. The start date is in conformance to the requirments of Glossary of CDM terms (version 09.1) /B06/. Also, the start date of the CPA will be after the start date of the PoA. Hence the expected start date of the CPA is in compliance with relevant requirements of CDM PS for PoAs /01-2/, the eligibility criterion requirement of the CDM PoA-DD /B02/ and CPA-DD /01/. The Validation Team reviwed the Self-declaration letter from CPA Implementer /09/ and CPA-DD /01/ to confirm the above.

					Conclusion: Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
10	Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance.	Affirm that no funding is coming from Annex I parties or if it does, that this is not a diversion of Official Development Assistance (ODA)[35];	Self-declaration from CME or CPA Implementer	Self-declaration by the CME has been provided to the DOE	Validated against self-declaration letter /10/ from the CME confirming that funding for the CPA is provided by a private entity namely Ecoeye Co., Ltd. (Ecoeye) and no ODA funding is involved in the CPA. The validation team also reviwed the contract agreement /15/ between CQC (as CME) and Ecoeye Co. Ltd. (as PP) to confirm the same. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
11	Specification of the technology/measure and performance specification based on testing/certification.	Ensure that the ICS installed/distributed under the CPA are single pot or multi pot portable or in-situ cook stoves with specified efficiency of at least 20%. The efficiency of the project systems (ICS) are certified by a national standards body or an appropriate	WBT results	TLC Rocket Stove planned to be installed under this CPA are single pot portable cook stoves that have an efficiency of 34.5% as per the manufacturer's specifications. Documentary evidence shall be submitted to DOE Water boiling tests will be carried out for efficiency of project stoves during ex-post monitoring.	Validated against water boiling test report /03/ which mentions a thermal efficiency of 34.5%. Thus, the requirements of §1 of the appied methodlogy are complied with. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this

		certifying agency recognized by it (using the WBT outlined in AMS IIG, Version 4 approved by the CDM Executive Board). Alternatively, manufacturers' specifications may be used;			eligibility criterion of the PoA.
12	Conditions to ensure the compliance with B_{old} requirements of the applied methodologies.	Use baseline fuel consumption (Bold) data from the household fuel survey (as per baseline reports attached to the PoA-DD and further described in Part II Section B.6.2 of the POA-DD) for the country region and fuel-type which is specifically eligible under this POA; Alternatively, historical data which is publicly available can be used for determining B_{old} value	Statement of which baseline included in the CPA will be used in this CPA.	The CPA applies data from reliable published sources for calculation of B_{old} value. Calculation has been included in registered PoA DD.	The value of B_{old} is as per the approved revised PoA DD. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
13	Conditions to ensure the compliance with f_{NRB} requirements of the applied methodologies.	Use the non-renewable biomass (NRB) fraction (as per NRB Reports attached to the PoA-DD and further described in Part II Section B.6.2 of the POA-DD or CDM default values as per EB67 Annex 22) for the country region36 in which the CPA will be implemented and that	Specification of the source of fNRB value. The source is included in this PoA.	The CPA applies fNRB value that is stated in PoA DD which has been calculated in accordance with EB 67, Annex 22	The value of non-renewable biomass fraction (f_{NRB}) is as per the approved revised PoA DD. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.

		is eligible under this POA or develop their own regional level NRB survey in accordance with AMS II.G (version 4). The geographical scope of each CPA must be limited to the geographical scope of the NRB analysis applied in that CPA;			
14	Conditions to check the mechanism that transfers the ownership rights of CERs from the ICS user to the CME.	Include a mechanism that transfers the ownership rights of CERs from the ICS user to the CME (or any affiliate it so designates), the precise mechanism to be established on a CPA basis. For example, a Registration Card, SMS, ICT or other means, which is signed or received by the end-user upon distribution or installation of the ICS, which shall state that the end-user transfers ownership of the carbon assets to the CME for the life of the stove[39];	Indication of how the mechanism that transfer the ownership rights of CERs will be implemented.	CPA Implementer is required to collect user data using a Registration Card (or as appropriate through SMS/ICT). Sales Team/distribution team will be instructed to explain that by agreeing to participate in this CPA, the end user is voluntarily transferring all ownership rights of the carbon assets arising because of use of ICS to the CME/CPA implementer. The end user will be required to give his consent after which he/she will be eligible to participate in the CPA. Documentary evidence for same will be submitted at the time of verification.	Based on review of CPA-DD /01/, CME manual /16/ and sample Registration Card /13/, the validation team confirms that appropriate mechanism is in place for transfer of the ownership rights of CERs from the end user to CME, as required by this eligibility criterion. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
15	If the generic CPA applies sampling for the determination of parameter values for calculating GHG emission reductions	Adhere to all requirements related to sampling for a PoA in accordance with Part II section B.7.2 of the PoA-DD;	Indication that CPA follows the sampling requirements outlined in Part II Section B.7.2 of this document.	This CPA follows all of the sampling requirements as specified in generic CPA.	As verified from the CPA-DD /01/ and Emission reduction spread sheets /02/, CME has developed a 'CPA specific sampling plan', which is based on simple random sampling,

	or net anthropogenic GHG removals, conditions related to sampling requirements for the PoA in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities.				according to the applied methodology AMS-II.G (version 04.0) /B03/ and as per the requirements of the revised PoA-DD /B02/. Validation team confirms that the CPA follows the sampling requirements outlined in Part II of Section I.7.2 of the revised PoA-DD /B02b/. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
16	Conditions to check the distribution mechanisms of the ICS.	Involve the promotion and distribution of ICS through direct distribution/installation, delivery, community distribution events, direct or distribution through commercial/retail outlets;	Description of ICS promotion and distribution methods under the CPA.	This CPA will distribute ICS on a commercial/non- commercial basis to end-users through direct distribution, community events or commercial retailers.	Based on review of CPA-DD /01/ and self declaration letter /08/ issued by CME regarding the CPA, which mention that ICS under the CPA will be installed on a commercial and non-commercial basis to end-users through the CPA implementer's field team, direct installation, community events and commercial retailers. **Conclusion:** Based on the above assessment, validation team concludes that the subject CPA complies with this eligibility criterion of the PoA.
17	Conditions related to environmental impact analysis.	CPA shall indicate what type of environmental analysis	Environmental assessment or statement of why an environmental	In accordance with regulations of Zambia, neither a project brief nor an environmental	As mentioned in the PoA-DD /B02/, the environmental impact analysis has to be

		is undertaken and provide evidence of compliance with national and local (eg. province level) regulations;	assessment is not needed in the context of the CPA.	impact assessment is required for improved cookstove project activities. Copy of regulation has been submitted to the DOE.	carried out at the CPA level. However, the validation team observed that conducting environment impact analysis is not mandatory as per the host party requirements for the type of project under the proposed CPA (installation/distribution and subsequent operation of improved cookstoves). Thus, the CME has not conducted an EIA which is deemed to be appropriate to the validation team. **Conclusion:** This eligibility criteria is not applicable for the proposed CPA.

Appendix 7. Validation Protocol for proposed CPA Inclusion into the PoA

Conformity of Component Project Activities

CDM-CPA-DD Requirements Checklist

"Distribution of Improved Cook Stoves in Sub-Saharan Africa Zambia-CPA-005"

in Zambia

Table 1: CDM-CPA-DD / CDM-SSC-CPA-DD Requirements Checklist ((based on § 37 of the CDM Modalities and Procedures and on VVS , Project Standard and Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities,)				
Checklist	**Comment**	**Ref.**	**Draft Concl.**	**Final Conc.**
Specific requirements of CPA				
SECTION A. General description of CPA				
A.1. Title of the proposed or registered PoA				
A.1.1. Is the reference and title of the PoA to which this CPA is included provided?	Yes, the reference number of the PoA has been provided in this section.	/01/	OK	OK
A.2. Title of the CPA				
A.2.1. Is the title of the CPA and the unique identification of the CPA Indicated?	Yes, the title of the CPA and the unique identification of the CPA has been appropriately indicated.	**/01/**	OK	OK
A.2.2. Is the current version number of the CPA-DD Indicated?	Yes, the current version number of CPA-DD has been provided in this section.	**/01/**	OK	OK
A.2.3.Is the date the CPA-DD was completed (DD/MM/YYYY) Indicated?	Yes, the date of completion of CPA-DD has been provided in this section.	**/01/**	OK	OK
A.3. Description of the CPA				
A.3.1 Is the description of the technology(ies) and/or measures used by the CPA is in accordance with the proposed or registered PoA, and in accordance with the applicable provisions in the Project standard?	Yes, the description of the technology and/or measure used by the CPA is in accordance with the proposed or registered PoA, and the applicable provisions in the Project standard.	/01/	OK	OK
A.4 Entity/individual responsible for CPA				
A.4.1.1 Is the information on the CPA implementer(s) provided? (CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided)	Yes, appropriate information on the CPA implementer has been provided. CPA will be implemented by CQC and Ecoeye.	/01/	OK	OK
A.4.1.2 Is the name of CPA implementers included in the CPA is consistent with the proposed/ registered PoA?	Yes, the name of CPA implementer included in the CPA is consistent with the registered PoA.	/01/	OK	OK
A.5 Technical description of the CPA				

A.5.1. Is the description the technologies and/or measures to be employed and/or implemented by the CPA including a list of the facilities, systems and equipment that will be installed and/or modified by the CPA provided?	Yes, the description of the technologies and/or measures to be employed and/or implemented by the CPA including a list of the facilities, systems and equipment that will be installed and/or modified by the CPA has been appropriately provided.	/01/, /B02/	OK	OK
A.5.2 Does the description includes;				
A.5.2.1 A list and the arrangement of the main manufacturing/production technologies, systems and equipment involved provided?	Not Applicable	/01/, /B02/	OK	OK
A.5.2.2 information about the age and average lifetime of the equipment based on manufacturer's specifications and industry standards, and existing and forecast installed capacities, load factors and efficiencies?	Yes, information about the age and average lifetime of the equipment is based on manufacturer's specifications.	/01/	OK	OK
A.5.2.3 The monitoring equipment detail and their location in the systems. Does the monitoring detail provided are complete to measure all data and parameters such that Emission reduction can be measured or calculated?	Not Applicable	/01/, /B02/	OK	OK
A.5.2.4 Energy and mass flows and balances of the systems and equipment included in the CPA?	Not Applicable	/01/, /B02/	OK	OK
A.5.2.5 The types and levels of services (normally in terms of mass or energy flows) provided by the systems and equipment that are being modified and/or installed under the CPA and their relation, if any, to other manufacturing/production equipment and systems outside the project boundary?	Not Applicable	/01/, /B02/	OK	OK
A.5.2.6 if the types and levels of services provided by those manufacturing/production systems and equipment outside the project boundary also constitute important parameters of the description. Does the description clearly explain how the same types and levels of services provided by the CPA would have been provided in the baseline scenario?	Not Applicable	/01/, /B02/	OK	OK
A.5.3 Does the description contains a list of:-				
A.5.3.1 Facilities, systems and equipment in operation under the existing scenario prior to the implementation of the CPA?	Yes, this section contains description of systems/equipment in operation under the existing scenario prior to the implementation of the CPA.	/01/, /B02/	OK	OK
A.5.3.2 Facilities, systems and equipment in the baseline scenario?	Yes, this section contains description of systems/equipment in operation existing in the baseline scenario.	/01/, /B02/	OK	OK

A.5.3.3 In case the baseline scenario is a continuation of current practice. Is it stated that both the scenarios are same?	Yes, the baseline scenario is a continuation of current practice.	/01/, /B02/	OK	OK
A.5.3.4 Does the information provides the purpose of the CPA and how it reduces GHG emissions?	Yes, information provided describes the purpose of the CPA and how it reduces GHG emissions.	/01/, /B02/	OK	OK
A.6. Party(ies)				
A.6.1 Does the Party (ies) and CPA implementer(s) involved in the CPA provided in tabular format and in Appendix 1 Consistent and the contact information complete?	Yes, the Party and CPA implementer involved in the CPA has been provided in tabular format and is further consistent with the information contained in Appendix 1 and is complete.	/01/	OK	OK
A.7. Geographic reference or other means of identification				
A.7.1 Is the geographic reference or other means of identification that allows for the unique identification of the CPA provided? (maximum in one page)?	Yes, appropriate geographic reference has been provided which allows for the unique identification of the CPA provided.	/01/	OK	OK
A.8. Duration of the CPA				
A.8.1 Start date of the CPA				
A.8.1 Is the start date provided in (DD/MM/YYYY) format?	Yes, the expected start date has been provided in the DD/MM/YYYY format.	/01/	OK	OK
A.8.1 Does the description, of how the start date was determined and is in line with the definition of start date in “Glossary of CDM terms” and provided in POA-DD?	Yes, the description of how the start date was determined has been provided and is further in line with the definition of start date in “Glossary of CDM terms”.	/01/	OK	OK
A.8.2 Expected operational lifetime of the CPA				
A.8.2.1 Is the expected operational lifetime of the CPA stated in years and months?	Yes, the expected operational lifetime of the CPA stated in years.	/01/	OK	OK
A.9. Choice of the crediting period and related information				
Does the type of crediting period renewable or Fixed chosen and clearly stated?	The type of crediting period chosen is renewable and is clearly stated.	/01/	OK	OK
A.9.1 Choice of the crediting period and related information				

Is the expected start date of the crediting period of the CPA indicated in (DD/MM/YYYY) format, and line with PoA?	Yes, the expected start date of the crediting period of the CPA (i.e. 01/03/2019) has been indicated in (DD/MM/YYYY) format and is line with PoA.	/01/	OK	OK
A.9.2 Length of the crediting period				
A.9.2.1 Is the length of the crediting period chosen clearly indicated?	Yes, the length of the crediting period chosen is 7 years (twice renewable) and has been clearly indicated.	/01/	OK	OK
A.9.2.1.1 In case a renewable crediting period is chosen, does the length of the first crediting period and the number of renewal periods provided?	Yes, renewable crediting period is chosen and the length of the first crediting period and the number of renewal periods has been appropriately provided.	/01/	OK	OK
A.9.2.1.2 Does the total renewal periods comply and do not exceed the PoA validity period?	Yes, the total renewal periods comply and do not exceed the PoA validity period.	/01/	OK	OK
A.10 Estimated amount of GHG emission reductions				
Does the estimated annual GHG emission reductions for each year of the crediting period and, the annual average and the total GHG emission reductions over the chosen crediting period (or the first crediting period) provided in the table?	Yes, the estimated annual GHG emission reductions for each year of the crediting period and, the annual average and the total GHG emission reductions over the chosen crediting period (or the first crediting period) have been provided in the table	/01/	OK	OK
A.11. Public funding of the CPA				
A.11.1 Does the PoA receives public funding from Parties included in Annex I?	No, the PoA does not receive public funding from Parties included in Annex I.	/01/	OK	OK
A.11.2 if the PoA receives public funding from Parties included in Annex I, is the information on Parties providing public funding Provided in Appendix 2 and the affirmation obtained from such Parties is in accordance with applicable provisions related to official development assistance in the Project standard?	Not Applicable	/01/	OK	OK
A.12. Confirmation for CPA				
A.12. Does the description include and confirm that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA?	Yes, the description includes and further confirms that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA.	/01/	OK	OK
SECTION B. Environmental analysis				
B.1. Analysis of the environmental impacts				

B.1.1 Is the analysis of the environmental impacts required and is undertaken,	No, analysis of the environmental impacts is not mandatory as per host party regulations.	/01/	OK	OK
B.1.2 Does the description and the analysis of environmental impacts undertaken is as per the PoA.	Not Applicable	/01/	OK	OK
B.2. Environmental impact assessment				
B.2.1. Is an environmental impact assessment required?	No, EIA is not mandatory as per host party regulations.	/01/	OK	OK
B.2.1.1 Does the assessment of the requirement of Environmental impact assessment and the conclusion & related references to all documentation provided?	Not Applicable	/01/	OK	OK
B.2.2 In case the section B1and B.2 is kept blank. Is it indicated and confirmed that the environmental analysis is provided at the PoA level.	Not Applicable	/01/	OK	OK
SECTION C. Local stakeholder comments				
C.1. Solicitation of comments from local stakeholders				
C.1 Is the detail of process by which comments from local stakeholders have been invited for the CPA described?	Local Stakeholder Consultation was conducted at PoA level. Thus, this section is Not Applicable.	/01/, /B02/	OK	OK
C.2. Summary of comments received				
C.2 Are all stakeholders that have made comments Identified and Is the summary of these comments provided?	Not Applicable	/01/, /B02/	OK	OK
C.3. Report on consideration of comments received				
C.3.1 Does the information provided demonstrate that all comments received have been considered?	Not Applicable	/01/, /B02/	OK	OK
C.3.2. In case the section C1 and C.2 is kept blank. Is it indicated and confirmed that the stakeholder consultation information is provided at the PoA level?	Not Applicable	/01/, /B02/	OK	OK
SECTION D. Eligibility of CPA and estimation of emissions reductions				
D.1. Title and reference of the approved baseline and monitoring methodology(ies) selected.				
D.1. Is the exact methodology(ies) Identified and reference & title of the approved methodology provided?	Yes, CME has provided the UNFCCC reference of the applied methodology.	/01/	OK	OK
D.2. Application of methodology(ies)				

D.2.1 Is it demonstrated how the applicability conditions of the approved methodology(ies) and the PoA are met?	PP is requested to clarify and further state in the CPA-DD whether the above statement applies to rural, urban or total population of the host country	/01/	OK	OK
D.2.2 Has the documentation that has been used provided and explained? Is the reference of documentation included in Appendix 3?	Yes, appropriate documentation has been provided and explained. The references have been included in Appendix-3 of this report.	/01/	OK	OK
D.3. Sources and GHGs				
D.3.1 Does all the sources and GHGs included in the CPA boundary Described in accordance with the PoA?	The description of project boundary provided is complete and as per the narrative provided in the applied methodology.	/01/	OK	OK
D.3.2 Does the proof which shows that the CPA is located within the geographical boundary of the proposed or registered PoA Provide?	Yes, the proof which shows that the CPA is located within the geographical boundary of the proposed or registered PoA has been mentioned and provided.	/01/	OK	OK
D.3.3. Does all emission sources and GHGs included in the CPA boundary described, explained and justified using the table provided?	Yes, all emission sources and GHGs included in the CPA boundary described are explained and justified using the table provided.	/01/	OK	OK
D.3.4 Does the section Include a flow diagram of equipment, energy and mass flows based on the description provided in section A.5. of CPA-DD?	Yes, this section includes a flow diagram of equipment, energy and mass flows based on the description provided in section B.2. of CPA-DD. The section numbering has changed from A.5 to B.2 as the CPA-DD form has been revised.	/01/	OK	OK
D.4. Description of the baseline scenario				
D.4 Is the description of the baseline scenario and its identification for the CPA is in accordance with the PoA?	Yes, the description of the baseline scenario and its identification for the CPA is in accordance with the PoA.	/01/	OK	OK
D.5. Demonstration of eligibility for a CPA				
D.5.1 Does CPA meets each of the eligibility criteria of the PoA including confirmation of additionality of the CPA for its inclusion into the PoA? Please provide assessment for each of the eligibility criteria as per the proposed or registered PoA DD, the eligibility criteria shall cover (unless differently mentioned in the registered PoA DD, if the registered PoA DD provides different set of eligibility criteria, consider those in the below row) a minimum the following :	Yes, the CPA meets each of the eligibility criteria of the PoA including confirmation of additionality of the CPA for its inclusion into the PoA.	/01/	OK	OK

(a) The geographical boundary of the CPA including any time-induced boundary # consistent with the geographical boundary set in the PoA # For example, an emission factor for electricity generation is dependent on the boundaries of regional or state or sub-regional grids.	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/	OK	OK
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/	OK	OK
(c) The specifications of technology/measure # including the level * and type of service, performance specifications including compliance with testing/certifications; # Specifications of the technology/measure shall include the type, capacity and other key features of the design of the systems. For example, indicating the installed capacity (in kW), size or dimensions, fixed/portable operation, and other key design features that makes the project cook stoves efficient, would be appropriate; however, only indicating that all cook stoves will have an efficiency X% would not be sufficient. * The level of service shall be defined in comparison with the baseline system being replaced.	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/	OK	OK

(d) Conditions to check the start date of the CPA through documentary evidence;	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(f) The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as assesed in section B.1 above;	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;# # See also relevant paragraphs of "CDM project cycle procedure".	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(h) Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance;	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) $; $ This is to re-test the validity of assumptions made at the PoA level. For example, in a lighting efficiency application, lighting usage hours of 3.5 hours per day would be valid if the target group is residences/households. Usage hours would be different in commercial applications and vice versa.	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK

(j) Where applicable, the conditions related to sampling requirements for the PoA in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities";	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(k) Where applicable, the conditions that ensure that every CPA meets the small- scale or microscale threshold # and remains within those thresholds throughout the crediting period of the CPA. However, for a CPA that consists of only units that qualify as 'microscale CDM units' as defined in the methodological tool "Demonstration of additionality of microscale project activities", this condition is not required; # Please refer to the latest approved version of the methodological tool "Demonstrating additionality of microscale project activities" and the latest approved version of the "General Guidelines to SSC CDM methodologies".	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK
(l) Where applicable, the requirements for the debundling check, in case the CPA belongs to small-scale or microscale project categories #. However, if a CPA solely consists of 'microscale CDM units', the requirement regarding debundling is not applicable. # Please refer to the latest approved version of the methodological tool "Assessment of debundling for small-scale project activities".	The demonstration of the CPA's compliance with this eligibility criterion has been successfully made by the CME. Refer to the assessment provided in Appendix-6 for further details.	/01/, /B02/	OK	OK

D.6. Estimation of emission reductions				
D.6.1.Explanation of methodological choices				
D.6.1.1 Is Explanation and justification for the methods and/or methodological steps, based on the applied methodology, for calculating baseline emissions applied to the CPA provided?	Yes, explanation and justification for the methods and/or methodological steps for calculating baseline emissions applied to the CPA have been provided in accordance with the applied methodology.	/01/, /B03/	OK	OK
D.6.1.2 Is Explanation and justification for the methods and/or methodological steps, based on the applied methodology, for calculating, project emissions, are applied to the CPA provided?	Not Applicable	/01/, /B03/	OK	OK
D.6.1.3 Is Explanation and justification for the methods and/or methodological steps, based on the applied methodology, for calculating, leakage emissions and emission reductions applied to the CPA provided?	Not Applicable	/01/, /B03/	OK	OK
D.6.1.4 Is Explanation and justification for the methods and/or methodological steps, based on the applied methodology, for calculating, emission reductions applied to the CPA provided?	Yes, explanation and justification for the methods and/or methodological steps, based on the applied methodology, for calculating, emission reductions applied to the CPA have been provided.	/01/, /B03/	OK	OK
D.6.1.5 Is the equation for calculating the emission reductions for CPA is in line with the methodology and the PoA?	Yes, the equation for calculating the emission reductions for CPA is in line with the methodology and the PoA.	/01/, /B03/	OK	OK
D.6.2. Data and parameters that are to be reported ex-ante				
D.6.2.1 Does the compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the registration and remain fixed throughout the crediting period described and provided?	Yes, the compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the registration and remain fixed throughout the crediting period has been described and provided.	/01/, /B02/	OK	OK
D.6.2.2. Is the compilation of information for data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.) are complete and as per the methodology and applicable conditions?	Yes, the compilation of information for data that are measured or sampled, and data that are collected from other sources are complete and as per the methodology and applicable conditions	/01/, /B02/	OK	OK

D.6.2.3. Are all data or parameter, complete with respect to the: "Value(s) of data applied, Choice of data, Purpose of data, Measurement methods and procedures to enable Calculation of baseline emissions; Project Emission, Leakage Emission, Emission Reduction? Pleas list all ex-ante parameters (as below) along with their values and provide an assessment on its appropriateness.	Yes, all data or parameters are complete with respect to the: "Value(s) of data applied, Choice of data, Purpose of data, Measurement methods and procedures to enable calculation of baseline emissions; project emissions, and emission reductions.	/01/, /B02/	OK	OK
Parameter: B_{old} Value: 5.696 Source of value: PoA DD	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK
Parameter: η_{old} Value: 0.10 Source of value: default value of applied methodology AMS-II.G (version 04)	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK
Parameter: $f_{NRB,y}$ Value: 0.81 Source of value: PoA DD	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK
Parameter: $NCV_{biomass}$ Value: 0.015 Source of value: default value of applied methodology AMS-II.G (version 04)	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK
Parameter: $EF_{projected\_fossilfuel}$ Value: 81.6 tCO_2/TJ Source of value: IPCC (2006) default value	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK
Parameter: L Value: 0.95 Source of value: default value of applied methodology AMS-II.G (version 04)	The validation team reviewed the reference source and deems the value to be appropriate. Refer to section D.5.2 for detailed assessment.	/01/, /B02/	OK	OK

D.6.3. Ex-ante calculation of emission reductions				
D.6.3.1. Is ex ante calculation of project emissions, baseline emissions, Leakage emissions and /or Emission reduction expected during the crediting period, Provided in a transparent manner based on data or parameters (in the table in section D.6.2 above) applying all relevant equations provided in the selected methodology?	Yes, the ex-ante calculation of baseline emissions and Emission reduction expected during the crediting period are provided in a transparent manner based on data or parameters (in the table in section D.6.2 above) applying all relevant equations provided in the selected methodology.	/01/	OK	OK
D.6.3.2 If any of these estimates has been determined by a sampling approach, then are the descriptions of the sampling efforts undertaken (in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities") Provided?	Yes, in cases where estimates have been determined by a sampling approach the descriptions of the sampling efforts undertaken have been provided.	/01/	OK	OK
D.6.3.3. Are the documentation of each equation applied, represented in a manner that enables the reader to reproduce the calculation?	Yes, the documentation of each equation applied is represented in a manner that enables the reader to reproduce the calculation.	/01/	OK	OK
D.6.3.4. Are the relevant, additional background information and/or data (including relevant electronic) spreadsheet provided in Appendix 4?	Not Applicable	/01/	OK	OK
D.6.3.5 Is a sample calculation for each equation used, substituting the values used in the equations Provided?	Yes, a sample calculation for each equation used, substituting the values used in the equations has been provided.	/01/	OK	OK
D.6.4. Summary of the ex-ante estimates of emission reductions				
Is the summary of all ex-ante estimation of Baseline Emission, Project Emission, Leakage Emission and Emission Reduction provided in accordance with given table?	Yes, the summary of all ex-ante estimation of Baseline Emission and Emission Reduction is provided in accordance with given table.	/01/	OK	OK
D.7. Application of the monitoring methodology and description of the monitoring plan				
D.7.1. Data and parameters to be monitored				
D.7.1.1. Is the specific information related to procedures for measurement, monitoring, recording, collected, archiving of data and parameters that is required for estimation and calculation of Emission Reduction provided?	Yes, the specific information related to procedures for measurement, monitoring, recording, collected, archiving of data and parameters that is required for estimation and calculation of Emission Reduction have been provided.	/01/	OK	OK

<table>
<tr><td>D.7.1.2 Are all data or parameter, complete with respect to the: “Value(s) of data applied, Choice of data, Purpose of data, Measurement methods and procedures, QA/QC procedures to enable Calculation of baseline emissions; Project Emission, Leakage Emission, Emission Reduction ?</td><td>Yes, all data or parameter are complete with respect to the: “Value(s) of data applied, Choice of data, Purpose of data, Measurement methods and procedures, QA/QC procedures to enable Calculation of baseline emissions; Project Emission, and Emission Reduction.</td><td>/01/</td><td>OK</td><td>OK</td></tr>
<tr><td>D.7.1.3 Are the relevant, additional background information on data and parameters to be monitored is provided in Appendix 5?</td><td>Not Applicable.</td><td>/01/</td><td>OK</td><td>OK</td></tr>
<tr><td>D.7.1.4 Is the list of parameters presented in section B.7.1 (Part II of PoA-DD) considered to be complete with regards to the requirements of the applied methodology?</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Parameter: $n_{y,j}$</td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No / NA</th></tr>
<tr><td>Title and description in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly stated?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method and procedure correctly described?</td><td>Yes</td></tr>
<tr><td>Purpose of data correctly described</td><td>Yes</td></tr>
<tr><td>Additional comments (if any)</td><td>NA</td></tr>
</table>
</td><td>/01/, /B02/</td><td>OK</td><td>OK</td></tr>
</table>

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<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method and procedure correctly described?</td><td>Yes</td></tr>
<tr><td>Purpose of data correctly described</td><td>Yes</td></tr>
<tr><td>Additional comments (if any)</td><td>NA</td></tr>
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<td>/01/, /B02/</td>
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<td>OK</td>
</tr>
<tr>
<td>Parameter: $\eta_{new,i}$</td>
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<tr><td>Data unit correctly stated?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method and procedure correctly described?</td><td>Yes</td></tr>
<tr><td>Purpose of data correctly described</td><td>Yes</td></tr>
<tr><td>Additional comments (if any)</td><td>NA</td></tr>
</table>
</td>
<td>/01/, /B02/</td>
<td>OK</td>
<td>OK</td>
</tr>
</table>

Parameter: SS_y	<table><tr><th>Monitoring Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title and description in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly stated?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method and procedure correctly described?</td><td>Yes</td></tr><tr><td>Purpose of data correctly described</td><td>Yes</td></tr><tr><td>Additional comments (if any)</td><td>NA</td></tr></table>	/01/, /B02/	OK	OK
D.7.2. Description of the monitoring plan				
D.7.2.1 Is the description of the monitoring plan for the CPA provided in accordance with the approved monitoring methodology (ies) and PoA?	Yes, the description of the monitoring plan for the CPA is provided in accordance with the approved monitoring methodology and PoA.	/01/, /B02/	OK	OK
D.7.2.2 In case the data and parameters to be monitored determined by sampling approach, are the description of sampling plan provided in accordance with the recommended outline for a sampling plan in the “Standard for sampling and surveys for CDM project activities and programme of activities”?	Yes, for the data and parameters to be monitored determined by sampling approach, the description of sampling plan is provided in accordance with the recommended outline for a sampling plan in the “Standard for sampling and surveys for CDM project activities and programme of activities.	/01/	OK	OK
D.7.3 Consistency check and font size	Yes all the information is consistent anf font size is accurate.	/01/	OK	OK
D.7.3.1 Does the following key terms and there description is consistent within the various section of the PoA-DD? P.S.: Additional rows may be added if required.				

D.7.3.1.1. CME and Participants of PoA	Yes, the description of CME and Participants of PoA is consistent within the various sections of the PoA-DD.	/01/	OK	OK
D.7.3.1.2. Description/ Technology or measures to be employed by the CPA	Yes, the description of Technology or measures to be employed by the CPA is consistent within the various sections of the PoA-DD.	/01/	OK	OK
D.7.3.1.3. Target group (end users type)	Yes, the Target group (end user type) listed are consistent within the various sections of the PoA-DD.	/01/	OK	OK
D.7.3.1.4. Eligibility criteria for inclusion of a CPA	Yes, the Eligibility criteria for inclusion of a CPA is consistent within the various sections of the PoA-DD.	/01/	OK	OK
D.7.3.2. Is the font size in all the respective documents is as per the requirements of Instructions for filling out the programme design document form for small-scale/large scale CDM programmes of activities?	Yes, the font size in all the respective documents is as per the requirements of Instructions for filling out the programme design document form for small-scale/large scale CDM programmes of activities.	/01/	OK	OK

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Document information

Version	*Date*	*Description*
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0).
01.0	4 May 2015	Initial publication.

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